

MARCH

1961

35¢

AMERICAN Cinematographer

The Magazine of Motion Picture Photography



CAMERAMAN ON HORSEBACK • PHILCO'S IN-PLANT FILM UNIT

SPRING SCENE 32 TV FILM PHOTOGRAPHY • HUNTERS THROUGH CINEMATOGRAPHY



"It takes teamwork—on ingredient indispensable to good picture-making"

"On 'The Untouchables' we had a prize-winning team," says Director of Photography Charles Straumer. "There was Operator Wilbur Bradley, for instance, and First Assistant Charles Short."

It was this series, starring Robert Stack as Eliot Ness, that won Straumer the coveted "Emmy" award of the Academy of Television Arts and Sciences for outstanding photographic achievement in 1959.

Charles Straumer and his crew regularly capture an invigorating breath of verity to bring the dramatic ring of truth to the television screen. We are proud to be a part of this fine team through DuPont Superior 2 and 4. These films—and complete data on them—are available from the DuPont Photo Products Sales Offices listed here.



ATLANTA 18, GA., 1737 Edwards Ind. Dr., N. W., CHICAGO 46, ILL., 4580 Taylor Ave., Edgewater Station, CLEVELAND 16, OHIO, 20575 Center Ridge Road, DALLAS 7, TEXAS, 1638 Oak Lawn Ave., LOS ANGELES 38, CALIF., 3051 Santa Monica Blvd., NEW YORK 33, N. Y., 248 West 38th St., WALTHAM 54, MASS., 45-419 Ave. (Eastend), WYNNERWOOD, PA., 308 East Lancaster Ave. (Phila.), EXPORT, Newsours Bldg., WASHINGTON 26, Del. IN CANADA: Du Pont of Canada, Ltd., Toronto



Better Things for Better Living
... through Chemistry

CECO^{*} professional jr.

Tripod with heavy duty grooved Tripod Legs

Now Standard Equipment for all
Famous CECO Pro Jr. Tripod Heads

Pro Jr Tripod is better than ever with new **Heavy Duty Grooved** tripod leg design. Assures greater rigidity, no matter how far legs are extended. **Heavy Duty Groove** design guarantees Herculean gripping power, because there's almost twice the gripping surface. Modern, rounded leg shape adds strength and durability to the wood. Comes equipped with indispensable double knob leg locks which assure equal pressure on each leg. Available with new ball joint swivel or standard base plate.

When you are looking for the best in a tripod, buy **Professional Junior**—the tripod designed with the professional in mind!

CECO Pro Jr. Fluid Head

The tripod head with smooth-as-silk maneuverability. Silicone fluid unaffected by extreme temperature range. Won't drive in locked position. Guaranteed leakproof. The undisputed performance champ!

In Hialeah, Florida:

1335 E. 10th Avenue
TUscalo 8-4604

In Hollywood, California:

6510 Santa Monica Boulevard
HOllywood 9-5119

*CECO — trademark of General Equipment Co.

CECO Pro Jr. Friction Head with Ball Joint Swivel

Allows really fast, easy leveling without adjusting tripod legs. Fits any Pro Jr Tripod with adapter base plate. Has some exclusive features in standard Pro Jr Friction head — Pan & Tilt tension controls, accessible camera mounting knob, adjustable interchangeable telescoping pan handle. Skillfully designed and engineered for long dependable service. Unconditionally guaranteed—the World's Standard of Tripod Quality!



CECO Ball Socket Swivel Joint Adapter For Pro Jr. Tripod Heads

A one piece adapter which fits quickly, easily on to any Pro Jr Head. For use on new swivel base tripod or standard Pro Jr tripod with ball socket adapter base plate.



CAMERA EQUIPMENT CO., INC.

Dept. A-71 35 W. 42nd St., New York 36, N.Y. • JElson 8-5420

Please send me FREE descriptive literature on CECO Professional Jr. Tripods and Tripod Heads.

Name

Firm

Address

City State Zip



**"BUZZ OFF" EMULSION
WITH
WESTERN Cine
16MM AUTOMATIC
SPLICER!**

MODEL II



**the most wanted splicer
IN AMERICA**

The all new Western Cine Automatic Splicer is the "best" one to buy! It features an exclusive power driven rotary scraper that does all the work for you. It meets the most exacting requirements of the film industry yet. It is so easy to operate that even the non-professional can make perfect splices every time . . . and in a few seconds! It's fully guaranteed. Get the details today!

SEE YOUR DEALER, OR WRITE



WESTERN CINE SERVICE, Inc.

312 So. Pearl St. • Denver 9, Colo.

AMERICAN

Cinematographer

ARTHUR E. GAVIN, Editor

MAISON HUTCHINS, Editorial Assistant

CONTRIBUTORS: Herb A. Lightman, Joseph V. Mascioli, Clifford V. Horneigan, Joseph Henry, Frederick Foster, Loren Grunk (Buenos), Jenn Weinger (Paris), Derek Hill (London)

Technical Advisors: Dr. Norwood L. Simmons

Editorial and Business Office: 1783 North Orange Drive Hollywood 28, Calif.
Telephone: HOLLYWOOD 7-8135

March, 1961

Vol. 42, No. 3

Feature Articles

CARRERMAN ON HORSEBACK	Herb A. Lightman	114
PRICO'S IN-PLANT FILM UNIT	Ray Ziper	118
ANSWERS THROUGH CINERATOGRAPHY	Dorin Scott	142
SHOOTING A TV PIKE IN JAPAN	Clifford V. Horneigan	144
THE TECHNIQUES OF CREATIVE FILM EDITING (Part I)		144
APPLYING SCIENCE TO TV FILM PHOTOGRAPHY	Stanley Lipensky	148
COLD STORAGE PROTECTS COLOR NEGATIVES	William Wallaceyer	170

Departments

INDUSTRY NEWS		134
WHAT'S NEW IN EQUIPMENT, ACCESSORIES, SERVICES		138
PHOTOGRAPHIC ASSIGNMENTS	Marion Hutchins	142
QUESTIONS & ANSWERS	Walter Strong, ASC	150

ON THE COVER

LARRY LANGBUSH shot a great deal of his Academy award-winning short subject, "The Walruskewler," from the back of a horse as he roamed Ardenne woodlands in search of subject matter. Here he prepares to film a scene of head-on collision, using lightweight Arriflex 35 camera.

AMERICAN CINEMATOGRAPHER, established 1920, is published monthly by the A. S. C. Agency, Inc., 1783 N. Orange Dr., Hollywood 28, Calif. SUBSCRIPTIONS: United States and Canada \$4.00 per year, foreign, including Pan-American Edition, \$5.00 per year. Single copies 25 cents. Back numbers 45 cents. Foreign single copies 45 cents. Back numbers, 50 cents. Advertising rates on application. Copyright 1961 by A. S. C. Agency, Inc. Second-class postage paid at Los Angeles, California.

NEW MITCHELL R-35

...only truly professional
portable reflex motion picture camera

Designed to cover the widest range of professional motion picture applications, the all new Mitchell R-35 reflex camera offers remarkable versatility to exceed the requirements of most discriminating cinematographers. Streamlined design is combined for the first time with the full range of professional features by Mitchell—world's leading source of truly professional motion picture cameras and equipment.



COMPACT
Incomparable
R-35
Film
Movement



Designed to produce rock-steady films completely compatible with those of the well-known Mitchell BNC, NC and Standard cameras, the new R-35 dual register pin movement features: Twin registration pins, twin pull-down claws, stop-motion to 120 FPS., removable aperture plate with built-in filter holder slot—holds two thicknesses of gelatin filters. Full size, 0.980" x 0.735", removable pressure plate, entire movement removable for cleaning—special construction insures fool-proof insertion with no loss of timing.

Hand Held or Tripod Mounted, the new Mitchell R-35 reflex camera uses a new series of Super Baltor matched lenses designed specifically for the R-35 by Bausch & Lomb. For Complete details of the outstanding features of this remarkable 35mm camera, write for the new R-35 Bulletin.

MITCHELL R-35

MITCHELL CAMERA CORPORATION
800 N. DAVENPORT, BURLINGAME, CALIF.
TECHNICAL REPRESENTATIVE
100 FIFTH AVE., NEW YORK 17, N. Y.

Camera Mart

CAMART SLATE & CLAPSTICK

Same professional size for
used production. Contains
space for all essential informa-
tion. Sturdily and for \$51.75
New only

\$4.75

P.O. Box New York
Postage added



CAMART OILER PEN



Delicately precision ad-
just — ideal for oiling
equipment which is hard to get at — \$1.99 in
quantity of six \$1.29 each

CAMART ELECTRIC TIMER



For location, post-recording, dubbing, timing in
any operation involving synchronous film finding.
Two synchronous timing meters and two precision
lamps measure camera run-out, lighting and its
application to meters and feet.
Model A or 24-hour timing meter with
alarm \$100.00
Combination 24-hour timing meter
without alarm \$150.00
Single Model A or 24-hour camera without alarm \$100.00

the CAMERA MART
1845 BROADWAY
NEW YORK 23, N. Y.
Sole Concerned

INDUSTRY NEWS

News briefs of
industry activities,
products and progress

Balloting for "Oscar"

Nominations ballots were mailed February 13 to members of the Art Direction, Cinematography, Film Editing and Music Branches of the Academy of Motion Picture Arts and Sciences for its upcoming 33rd Annual Awards presentation.

Members of each branch will vote to select nominations for best achievements in their respective fields, and Art Direction Branch members will nominate in both art direction and costume design. Nominations polls close in these categories February 21st and all nominations will be announced February 27, too late to enable us to report results in this issue.

Separate color and black-and-white Awards are voted for achievements in art direction, cinematography and costume design. Music Branch members will select nominations for best songs, best scoring of a musical picture and best music score of a dramatic or comedy picture.

On February 14th, polling was terminated for nominations following in the acting, directing, writing and best picture categories.

Making selections from achievements in 343 eligible motion pictures, the Academy voting membership will have nominated five achievements in each of the following categories:

Best performance by an actor; best performance by an actor in a supporting role; best performance by an actress in a supporting role; best motion picture of the year; best achievement in direction; best screenplay based on material from another medium; and best story and screenplay written directly for the screen.

These, and other nominations, will be announced Feb. 27. Final ballots will be mailed March 17, following which the full Academy membership will select the "Oscar" winners in each category.

The 33rd Annual "Oscar" Show will be presented April 17 at 7:30 p.m. (EST) over the combined radio and television facilities of the American Broadcasting Company and the Canadian Broadcasting Company. Bob Hope will MC the affair.

Fishery Award Jury Named

A ten-man board has been named to

serve as the jury for New York City College's 12th annual Robert J. Fishery film competition. It has been announced by Yael Wolk, director of CCNY's Institute of Film Techniques which sponsors the award.

Closing date for entries for the Fishery Award competition is February 28. Application blanks may be obtained by producers from the City College film institute, 133rd Street and Convent Avenue, N.Y. 31.

City College's Fishery Award, given for "outstanding creative achievement" in films of a factual nature, was given last year to the CBS-TV film, "Hells and the Teensters." Other award-winning films have included "The Quiet One," "The Titans," and "The Conquest of Everest."

* * *

Eastman Kodak To Enter Magnetic Tape Field

Eastman Kodak Company announced last month that it will manufacture and sell magnetic recording tape, and that its products will make their appearance later this year.

Entry into the magnetic tape field represents a new but not unexpected step for Kodak, whose French associate company, Kodak Pathé, has been producing and selling quality tape abroad for more than twelve years. The move chronicles a program that has been backed by extensive research and development in France and in Rochester laboratories.

Initially, Kodak magnetic tape will be supplied for professional and amateur sound recording use. It will be on a triacetate base and packaged in rolls 1½-inch wide in standard lengths.

Sale of tape for the popular home-recording uses will be through Kodak's regular distribution organization of established photographic dealers. In its professional motion picture film business, the company has been in close touch with customers who use professional magnetic tape, and the professional motion picture sales division of the company will handle distribution of Kodak tape to this professional trade. Since 1952 the company has provided for coating of a magnetic track, called Kodak Soundtrack Coating, on amateur movie film for sound recording.

Continued on Page 124

At a moment's Notice...

ALL THIS EQUIPMENT...AND MUCH, MUCH MORE IS AVAILABLE FROM

Charles Ross

LIGHTS, GRIPS, PROPS

INKIES, ARCS, DIMMERS, CABLES, BOXES,

REFLECTORS, DOLLIES, MIKE BOOMS, NETS,

LOCATION UMBRELLAS, WATER COOLERS, FLAGS,

CENTURIES, SCRIMS, HYDRAULIC STANDS, PARALLELS,

DIRECTORS CHAIRS, MANY OTHER ITEMS—YOU NAME IT...

For 40 years, leading producers have depended on Charles Ross for all their production needs. At a moment's notice, you can get the lights, props, grip equipment and generator trucks from the largest suppliers of motion picture, TV and industrial photographic equipment in the East. At Charles Ross, you'll find everything your production schedule requires — except the colors of course.

Before you shoot your next picture, dial Charles Ross... let us know your requirements... we'll be happy to fill them at a moment's notice!



GENERATOR TRUCKS AND TRAILERS

1800, 1600, 1000, 750, 300, 200 Amp. D.C.,
100, 50, 30, 20 Amp. A.C.

RENTALS SALES SERVICE

Send for a schedule of rental rates.



Charles Ross INC.

*Lighting the Motion Picture Industry
Since 1921*

333 West 52nd Street, New York City, Circle 6-5470

Camera Mart

**NEW DESIGN
FILM BIN
WITH RACK**



- Rectangular construction measures 30"x24"x12".
- Fits under film cases.

- Easy to view strips of film
- Hard reinforced floor with reinforced metal frame
- Complete film rack design bag
- With easy-roll wheels

\$45.25
\$51.75



**CAMART TIGHTWIND
ADAPTER**



- Only BALL BEARING tightwinds
- Eliminates clicking or vibrations
- won't film over-ly—No slipping
- Fitted in any 16 or 35mm camera

\$34.95

**CAMART
CORE
DISPENSER**



Simply attach to wall for keeping plastic film cores handy at all times.

Altitude	
16"	\$ 9.50
34"	11.50
36"	14.50
24" Dispenser for 30" or 100' plastic rolls	24.00

All Items
F.O.B. New York



the CAMERA MART INC.

1845 BROADWAY
NEW YORK 23, N. Y.

Cable Connection

INDUSTRY NEWS

Continued from Page 124

New Dates For IFFA National Convention

The Second National Convention of the Industry Film Producers Association, originally set for March 31-April 1 at the Metropole Hotel in Santa Monica, Calif., has been rescheduled for June 2 and 3 at the same location. The dates have been changed in order to avoid conflict with Easter observances and to grant some Convention Trade Show participants additional time to prepare exhibits.

This year's Trade Show is expected to introduce several innovations to the film industry, with particular reference to professional use of 16mm film and equipment. Among sessions already scheduled for the program are: Low Budget Animation, Dubbing for Foreign Distribution, the Role of Motion Pictures in Nuclear Weapons Testing and Techniques of Music and Sound Effects.

A major feature will be a "Production Clinic," where a staff of experts will be available to discuss specific problems of film production with convention delegates.

Persons wishing to participate in the convention are asked to address Convention Headquarters, c/o the Paul Garrison Organization, 10323-F Santa Monica Blvd., Los Angeles 25, Calif.

Spectra Spot Meter To Aid Radar Operations

Photo Research Corp. has received a \$50,000 contract from the Federal Aviation Agency for the Spectra Brightness Spot Meter. This is the instrument for which Karl Freund A.S.C. received the 1955 Academy Award Class 3 certificate for scientific and technical achievement.

The meter was originally designed to telephotoically measure the brightness of motion picture screens.

The FAA Radar Branch will use the meter in its new light display system because of the instrument's ability to measure as much as small as .015 of an inch.

Two Conventions Slated

Two dates to keep in mind for the future are the opening dates for the SMPTE's 29th Convention in Toronto, Canada, May 7th to 12th, and the annual convention of the Society of Photographic Scientists and Engineers at the Arlington Hotel in Birmingham, New York, May 22nd to 26th.

"International Achievements in Motion Pictures and Television" is the

theme of the week-long SMPTE conference, which takes place at Toronto's King Edward-Sheraton Hotel. Delegates have already been received that representatives from Italy, Sweden, England, France, Czechoslovakia, Union of South Africa, and the USSR will attend.

Scientists from Japan, Germany, Belgium and from all corners of the U.S. are slated to attend the SPSE convention in Birmingham. Among the top subjects on the SPSE agenda are new advances in color and black-and-white photography, and photography at high speeds and altitudes and in outer space.

Futures For 16mm Film

Increasing cost pressures may change the future pattern of motion picture production techniques for the television industry, according to Dr. Norwood Simmons, Eastman Kodak executive. In a talk before a professional Workshop sponsored by Calma Productions, Inc., Kansas City, Mo., Dr. Simmons revealed that 16mm film is becoming increasingly important as a potential tool of the entertainment industry.

In discussing entertainment applications for 16mm film, Dr. Simmons, who is manager of the West Coast Division of Eastman Kodak's Motion Picture Film Department, said that 16mm film has become the standard distribution medium for the television industry. Television, once thought of as an enemy of the motion picture business, now consumes some 650 million feet per year of 16mm film, he said.

Although the great bulk of this film is now consumed in making television release prints from 35mm originals, Dr. Simmons indicated there is considerable interest—both among theatrical and television producers—in the use of 16mm film as a production medium.

The main reason for this interest lies in the cost factor. A recent survey made for a major television network revealed that an hour-long color show produced on 16mm film as compared with 35mm materials saved almost \$10,000. This saving was in film and laboratory charges only. Additional economies could be realized through operational savings inherent in 16mm techniques.

If color production became a universal requirement, the industry could save between \$500,000 and \$750,000 every week if it adopted 16mm as a production standard, Dr. Simmons pointed out.

Talking to an audience composed primarily of producers of 16mm films for non-theatrical outlets, Dr. Simmons stated bluntly that there is a definite quality loss in producing on 16mm film as compared with 35mm.

New... from Gordon Enterprises

PHOTO EQUIPMENT RENTAL PRICE LIST

Cameras, Lenses, Magazines, Motors and Accessories
for

Motion Pictures, Television, Photo Instrumentation,
Data Recording, Aerial and Underwater Photography

MAIL COUPON TODAY

*in your free copy and have the world's largest inventory
of photographic equipment at your disposal.*

TRiangle 7-2135



gordon enterprises
Serving the World

GORDON ENTERPRISES

5263 Calaveras Blvd., North Hollywood, Calif.

Gentlemen

Please rush your new Photographic Rental Price List.

Name

Firm

City

Zone

State

5262 No. Calaveras Blvd. No. Hollywood, Calif.

TRiangle 7-2135

POrtland 4-3731

Camera Mart

ARRIFLEX 16

16mm and 35mm cameras in stock for immediate delivery. Arriflex 16mm and 35mm camera and press kit blimps available. 400° magnifying Synchroscan motion. New and used.



CAMART BABY DOLLY

The only portable four-wheel dolly, provides balance and stability. Adjustable seat for convenience. Features: smooth, modular, universal. \$425.00

Daily Trucks Available



CAMART DUAL SOUND EDITOR



Complete with optical or magnetic sound reproduction head, base plate, amplifier, speaker. Used for single or double sound. Dual reader (without viewer) \$195.00
Dual Reader Viewer 15.00
Special Editor Viewer 240.00

the CAMERA MART, Inc.

1845 BROADWAY
NEW YORK 23, N. Y.
Lida Johnson

WHAT'S NEW

IN EQUIPMENT, ACCESSORIES, SERVICES



Film Nippers for Editors

Hagerthy Enterprises, P.O. Box 3278, Glendale 1, Calif., announces the availability of the first scissors designed expressly for film cutting. The "Film Nippers" are 5 inches overall with a full 2-inch cutting edge. Unique, patented spring action keeps them always open, always ready for use, and eliminates unnecessary fumbling for finger holes. "Film Nippers" can be worn like a ring, resting comfortably in the palm of the hand, leaving fingers free to handle film.

"Film Nippers" are nickel plated and made of finest steel with stainless steel springs and ball bearings. List price, \$3.60. Post-paid anywhere in U.S.A. for \$3.75.



Omnicolor Telephotos

Binas & Sawyer Cine Equip. Co., 6324 Santa Monica Blvd., Hollywood 38, Calif., announces it is national distributor of the well-known line of Omnicolor telephoto lenses, monocular Omnicolors, and lens-to-camera support cradles. The Omnicolors are said to be the only complete lens system, comprising twelve separate focal lengths ranging from 125mm through 2000mm, and providing individual lens mounts for 28 cameras in the fields of 16mm, 35mm and 70mm photography. A 4-page illustrated brochure on Omnicolor

lenses and related equipment is available free from the company.

New Optical Printing Service

Optical Printing Service, Inc., has been established at 2808 Bowser in Dallas, Texas, to serve Southwestern film producers and clients.

The only Acme optical printing service in the Southwest, O.P.S., Inc., provides 35mm to 16mm, 16mm to 35mm and 35mm to 35mm color and black-and-white optical printing and all forms of optical effects, including dissolves, fades and wipes, montages, titles, plates for rear screen projection, photographic corrections, split screens and traveling mattes.



Fog Makers

Mole-Richardson Company, 932 No. Spentano Ave., Hollywood 38, Calif., recently added a series of artificial fog and mist producers to its line of motion picture effects equipment. Three models with a wide range of needs in the production of fog or mist on the sound stage or on exterior sets. Illustrated is the Model 9993 Sensor Dyna-Fogmaker which is capable of creating the effect of an ocean fog over a large area or to simulate a volume of smoke issuing from the windows of a burning building, etc. Equipment can also be used for discharging insect repellent over wide areas, as on a location when insects, mosquitoes, moths, etc., invade the shooting area. The fog making unit weighs but 100 lbs. It is semi-stationary, when in use it is connected to a 55-gallon drum containing the fog-making compound or insect repellent, as shown in illustration.

Film Printers

Uder Cine Machine Co., 15762 W-y-

Continued on Page 140

Announcing the new **BACH Auricon** "PRO-600 SPECIAL" ...a lightweight companion to the popular "PRO-600"

Auricon proudly presents the new "PRO-600 Special," a lightweight companion to the famous "Pro-600," now in use by cameramen all over the world!

The "Pro-600 Special," like other precision cameras in the Auricon line, is a superb professional picture-taking instrument. Self-blinded and silent in operation. At a small extra cost for built-in Sound Equipment, it can even record Optical or Filmagnetic Single-System sound. The "Pro-600 Special" being driven by a true, synchronous motor is ideal for exacting Double-System sound recording as well.

While the "Pro-600" is popular for Studio and occasional Newsworld operation, the new "Pro-600 Special" with its minimum weight and easy portability, is the perfect answer for heavy duty Newsworld and Documentary filming.



Write for free
Pro-600 Special
Literature and
prices.



PRO-600 SPECIAL FOR NEWSREEL & DOCUMENTARY FILMING
MODEL CM-25

PRO-600 STANDARD CAMERA
MODEL CM-20

HEART OF THE NEW "PRO-600 SPECIAL"

The secret behind the light weight of the new "Pro-600 Special" is its newly developed Auricon Super-Silent Synchronous Soundrive. This precision motor has taken 5 years to perfect and is designed to meet the most exacting sound recording requirements.

NEW AURICON ALL-TRANSISTORIZED FILMAGNETIC

New "all weather" Amplifier Model MA-21, can operate at the freezing South Pole or the boiling Sahara Desert, without affecting its temperature compensated 34 transistor circuitry or frequency response of 50 to 12,000 cycles. Permanent internal rechargeable battery for complete portability, or A.C. operated when plugged into a 110 V outlet. Weighs only 5 pounds.



THE AURICON LINE OF 16MM SOUND-ON-FILM CAMERAS



GUARANTEE

All Auricon Equipment is sold with a 30-day money back Guarantee and a 3 year Service Warranty. You must be satisfied!



AURICON FILMAGNETIC AND SOUNDRIVE ARE TRADEMARKS OF BACH AURICON, INC.



LINE VOCODER
100-10. Runs 100 mts.



AURICON PRO 600
500-10. Runs 100 mts.



AURICON SUPER 1200
1200-10. Runs 120 mts.

BACH AURICON, Inc.
3838 Romaine Street, Hollywood 28, California.
HOLLYWOOD 2-0881

Value #1 from HOLLYCAM

MITCHELL SINGLE-SYSTEM OUTFIT with RCA Sound System

A complete 35mm SINGLE-SYSTEM PACKAGE
READY TO GO TO WORK. Complete box with reel
and all built-in features.



ALL FOR ONLY **\$675000**

COMPLETE OUTFIT INCLUDES

Northall 35mm Single-System Camera 4 coated
Belmo Lens 25mm, 35mm, 50mm and 132mm
1 set of 16mm Bellows, Metal box with leather
handles and gun shade. Function-controlling view-
finder with 16mm magnifying frame. Subminiature
PUSH 2000 ft. magazine (12 with doors) set of
cables. Complete RCA sound system incl. speaker,
recorder, mixer, amp, mic, microphone, etc. Set of
empty reels. A \$12,000.00 Value

BELL & HOWELL 35mm CAMERA

Standard Professional Studio Camera. Absolutely
reliable fine registration with focus. Unit 1,
fixed solid pin movement. Two lens, same, pin
metal. One for lens. Focus 170 degree variable
shutter with automatic strobes and many more
amazing features. Price for \$8,000.00

Now only **\$149500**

Write for list of times & companies.
With informed statement up to 750 sq ft.
list is \$495.00. * Special \$1,495.00

WALL 35mm Single-System Sound Camera

With excellent and regulation per camera.
COMPLETE with sound system including cables,
speaker and amplifier, cables, records 1/2 mag,
drive, variable meter and empty reels.
Plus FOUR LENSES. A \$14,000.00 Value

Only **\$199500**

Send us check, less actual equipment. \$1,200.00
All equipment is used, excellent
and guaranteed service.

HOLLYWOOD CAMERA CO.

10411 CHANDLER AVENUE
NORTH HOLLYWOOD, CALIFORNIA

WHAT'S NEW

Continued from Page 128

among Ave., Detroit 38, Mich., an-
nounces, as a new addition to its ex-
tensive line of motion picture film
printers, the Ulber Professional Com-
bination Means/Trim Contact Printer.
Equipment will print sound and pic-
ture separately or simultaneously; the
negative picture and sound track on
positive film; or separate sound track
and picture negative printed to posi-
tive in a single operation. Positive to
positive printing with reversal film or
16mm film, color or black-and-white is
also afforded.

Among the many added new fea-
tures are improved mechanical and me-
chanical operation, sturdier construc-
tion, larger printing sprocket with 6
sets of feed and take-up sprockets and
rollers. List price is \$1,777.00, f.o.b.
Detroit, Mich. Literature is available
describing the company's entire line of
printers.



Spray Cleaning Solvent

Zipp, an aerosol spray cleaning sol-
vent, has numerous applications in the
cinematographic field. For projectors,
it is used for cleaning sprockets, roller
pads and interiors of projector heads.
It is also used to clean commutators
of motors and prisms of vacuum tubes
of sound systems.

A unique feature of Zipp is the fact
that it can be sprayed on an electric
motor while the motor is actually run-
ning, so that no shut-down time is re-
quired. The product dries rapidly and
leaves no film or vapor. It will not short
electrical equipment, is noncorrosive
and nonflammable, contains no carbon-
t, and is safe for painted surfaces.
Zipp is manufactured by Seward-Hall
Chemical Corporation, 222 Washing-
ton Street, Mount Vernon, N.Y.



Multi-Channel Recorder/Reproducer

The Magnasone Series T-1000 mag-
netic tape recording/reproducing sys-
tems are available with as many as 20
channels for the simultaneous record-
ing of voice-frequency program ma-
terial. Offered with a variety of tape
speeds and capacities, recording and
reproducing time ranges from 2 to 24
hours.

Features, plug-in transistORIZED cir-
cuitry provides high reliability and low
maintenance. Magnasone's "synkine-
tic" dual flywheel flutter free drive,
straight-line threading with inherent
advantages of tightstep threading; dif-
ferential double-capstan drive assures
perfect tape contact with all channels;
synchronous motor drives tape at uni-
form velocity; positive, photo-trans-
istor shuttles at both ends of reel; moni-
toring at high speed forward or fast
forward with unique "crasing" device;
provisions for remote control; pack-
aged in single rack cabinet or in tan-
dem with automatic switch-over to com-
panion recorder. Many optional fea-
tures are available such as "fail-safe"
warning system which automatically
stops incoming recorder and energizes
visual and audible alarm in event of
mechanical or electronic failure; vari-
able-speed drive; interjection of time
reference signals; high frequency
erase, packaging in wall cabinet with
direct service access, or in self-contained
mobile trailer. Manufacturer is Magna-
sone Corporation, 5556 Salsman, North
Hollywood, Calif.

Varifocal Lens for Ariflex

The Ariflex Corporation of Amer-
ica, 257 Park Avenue South, New
York 10, New York, has announced a
new Ariflex varifocal lens, which
has a focal range from 35mm to
140mm, maximum aperture F/3.5
and focuses down to five feet. The lens
is manufactured by Ariflex in Ariflex
mounts to Ariflex standards.

in the east... it's
MOVIELAB

for **color***
and
black
&
white

MOVIELAB

MOVIELAB FILM LABORATORIES
MOVIELAB BUILDING, 615 W. 54th ST.
NEW YORK 19, N.Y. JU5-5016

*developing color negatives • additive color printing • reduction printing including A & B • color slide film processing • blowups • internegatives • Kodachrome scene-to-scene color balanced printing • Ektachrome developing and printing • registration printing • plus complete black and white facilities including cutting rooms, storage rooms and the finest screening facilities in the east

Value #2 from HOLLYCAM

16mm x 400'
MAGAZINES
for **BELL & HOWELL**
CAMERAS



Brand New! Just \$195.00
Special 129.50

Also available from stock:

16mm x 400'	92.50*
For Model 18	
16mm x 200'	295.00
Cine Special Chamber	
16mm x 400'	355.00
Cine Special Chamber	
16mm x 100'	125.00
Cine Special Chamber	
16mm x 400'	145.00
Model 18	
16mm x 400'	175.00
Editor Camera	
16mm x 200'	47.50
Bell & Howell (Model)	
16mm x 400'	19.95
Bell & Howell (Plan)	
16mm x 400'	54.50
Bell & Howell (Model)	
16mm x 1000'	95.00*
Bell & Howell (Model)	
16mm x 400'	59.00
Model Magazine	
16mm x 400'	235.00
Model Magazine (16 Pack)	
16mm x 1000'	99.00
Model Magazine	
16mm x 2000'	169.00
Model Magazine	
16mm x 400'	89.00
For Bell & Howell Model 170 (A)	
16mm x 1000'	115.00
For Bell & Howell Model 170 (A)	
16mm x 400'	54.50
Wall Magazine	
16mm x 1000'	95.00*
Wall Magazine	
16mm x 200'	69.50*
Artificial Camera	
16mm x 400'	119.00*
Artificial Camera	
16mm x 100'	85.00
Editor Camera Magazine	

*With 16mm not stored in excellent and guaranteed condition.

HOLLYWOOD CAMERA CO.

12611 CHAMBER HOLLOWAY
NORTH HOLLYWOOD, CALIFORNIA

PHOTOGRAPHIC ASSIGNMENTS

WHAT THE INDUSTRY'S CAMERAMEN WERE SHOOTING LAST MONTH

By MARION HUTCHINS

NOTE: Asterisks indicate minimum film production

ALLIED ARTISTS

JOSEPH BIRCH, ASC, "Operation Takeover" (Buschell Diamond Prod.) with Werner Klemperer and Donald Buka; R. G. Springsteen, director

CARL GUTBERG, ASC, "Twenty Five Two" with David Janssen and Jeanne Crain; Joe Newman, director



ELLENOR FREEDMAN, ASC

Directed the photography last month of the TV pilot film, "Mama," at Twentieth Century-Fox Studios

CASCADE STUDIO

ROY SEARWICK, Commercial*

ELWOOD BRIDELL, ASC, Commercial*

COLUMBIA STUDIOS

GARY ANGERMEYER, ASC, "Dennis Reed Show" (Screen Gems) with Dennis Reed; Andrew McCullough, director

DOUGLAS SACCOMBE, "Taste of Fear" (Paramount Film Prod., shooting in England) with Susan Strasberg and Ronald Lewis; Seth Holt, director

JACK MANDA, "Route 66" (Screen Gems) with Merit Miner and George Mathews

CHARLES WELLS, "Dennis the Minnow" (Screen Gems) with Jay North and Herbert Anderson

PHILIP TARRARA, ASC, "Two Faces West" (Screen Gems) with Charles Balmory and Jane Blair, "Midwest" (Screen Gems) with Vicki Jury and Pat McVey Ford; Jackson, director

JOHN LUTHEY, FRED GATLEY, ASC, "My Sister Eileen" (Screen Gems) with Shirley Boone and Elaine Stritch

J. DONALD MARLEY, ASC, Commercial* (Screen Gems)

CHARLES LAWTON, ASC, Commercial* (Screen Gems)

FRED GATLEY, ASC, Commercial* (Screen Gems)

JAMES BROOKER, Commercial* (Screen Gems)

WILLIAMS, Commercial* (Screen Gems)

BYRON BAKER, "Valley of Dragons" (Montecarlo, Zilli Prods.) with Sean McClary and Danielle DeMora; Edw. Bernds, director

DELMONTE-CORRADO

BO HICKER, ASC, "The Andy Griffith Show" (Decca Prods.) with Andy Griffith, HARRY CHRISTENSEN, "One Happy Family" (Decca Prods.), "Jack Bracy Show" (Decca Prods.) with Jack Bracy

ROBERT DE GRASSE, ASC, "Angel" (Decca Prods.) with Anne Ferg and Marshall Thompson; LARRY JOHNSON, director; "Daisy Thomas Show" (Decca Prods.) with Daisy Thomas

DISNEY—Culver City

CHARLES SCHWARTZ, "The Tennessean" (Decca Prods.) with Robert Stack and Jerry Ford

LOUIS ARMSTRONG, ASC, "Goodward Ho" (Decca Prods.) with Joanne Bru and Mark Miller

LEONARD WORTH, ASC, "The Real McCoys" (Brunswick-Warner Prods.) with Walter Brennan

ROBERT HANSEN, "S. I. C." (Pilot; Decca Prods.)

DISNEY—Gower

CHARLES YER EWE, ASC, "Lando" (Jack Warner Prods.) with Jack Lickert and Joe Frown

ROBERT FLANCK, ASC, "My Three Sons" (Decca Prods.) with Fred MacMurray and William Frawley

FORNEY STEWART, ASC, "Ann Sothern Show" (Decca Prods.) with Ann Sothern

LOUIS ARMSTRONG, ASC, "Havlicke and Scott" (Decca Prods.) with Pat O'Brien and Roger Perry

HOWARD FINEBERG, ASC, "Happy" (Decca Prods.) with Ronald Lee

FOX WESTERN AVENUE

JOHN RAY TRICK, ASC, "Dale Gribble" with Wayne Hickman; Edw. Anderson, director

GENERAL SERVICE STUDIOS

FRANK REIDMAN, ASC, "Perry Mason" (CBS-TV) with Raymond Burr and Barbara Hale

MARGARET NEWMAN, "Blue Angels" (Decca Prods.) with Dan Gordin and Morgan Jones

HAROLD LUTHEY, ASC, "Adventures of Ozzie and Harriet" (Stage 5 Prods.) with the Nelson family; Ozzie Nelson, director

Continued on Page 146

JU 6-1420

that gets the show on the road!

The first thing to do when you get your budget okayed, is to call **Julesen 6-1420**. Technicians at CECO® go into action on the double. Cameras, lights, sound recorders and accessories are assembled for quick delivery across town or across the continent.

Producers, directors, cameramen and sound engineers come to CECO—for the smallest job to the biggest spectacular...

1) BECAUSE CECO is the world's largest and most knowledgeable distributor and manufacturer of professional photographic equipment. The best brains in the industry beat a path to our door.

2) BECAUSE "success teaches success". Our engineers are a repository of the techniques and trade secrets of America's best known cameramen. They pass along to you—free of charge—the shortcuts and special methods for solving your picture problems. Call today... **Julesen 6-1420**.



NEW WADCELL HIGH SPEED 14MM CAMERA. A flexible high speed camera with speed range from 3 to 30,000 pps. Ideal for data recording. WADCELL Silver High Speed Struck Camera also available.



CECO HIAMP FOR 14MM MAUER CAMERA. The first compact, instant lighting for MAUER 14mm. Permits easy accessibility.

CECO MODIFICATION PLATE FOR ARRI 35MM. A bell bottom modification for the 35mm ARRI, utilizing rotating motor drive.



CECO STOP MOTION MOTORS FOR CING-SPECTRA, ARRI-FLEX, MITTELL and MAUER CAMERAS. 110 Volt AC operation, forward and reverse. (Illustrated with Cing-Spectra)



CECO 35MM PROFESSIONAL FILM VIEWER-ANALYZER WITH DOUBLE SYSTEM SOUND READER. Easy threading, portable. Available with single system sound or as viewer only. 16mm models also.

© 1964 JULESEN

CAMERA EQUIPMENT CO., INC. 315 West 42nd St., New York 36, N. Y.
JU 6-1420

Gentlemen: I am interested in the items checked below. Please rush me more free information on these products.

- | | |
|---|---|
| <input type="checkbox"/> PROSCAR 16mm Cinemascope Lens | <input type="checkbox"/> MAGNASTATIC A31 Type 13 Dubber |
| <input type="checkbox"/> CECO Hi-Tread Editing Table | <input type="checkbox"/> NOMAD Transistorized Sound Recorder-Repeater |
| <input type="checkbox"/> CECO 35mm Film Viewer-Analyser | <input type="checkbox"/> OXBERRY Universal Model TR |
| <input type="checkbox"/> WADCELL High Speed 14mm Camera | <input type="checkbox"/> CECO Triangles, Model C |
| <input type="checkbox"/> COLOMBIAN Clocking Light | <input type="checkbox"/> ARRI-FLEX 16mm Camera |
| <input type="checkbox"/> NIGERIA Projector Stand | <input type="checkbox"/> CECO modification plate for Arri 35mm |
| <input type="checkbox"/> CECO Hiamp for Mauer 14mm | |
| <input type="checkbox"/> CECO Stop Motion Motor | |

Name _____ Title _____

Firm _____

Address _____

City _____ State _____

For more information
send this Postage
Free Card
TODAY!



PROSTATE 14MM CINEMASCOPE LENS
A combination camera and projection lens which projects sharp images 2 1/2 times wider in scope



GEO TRIPOD TRIANGLES, MODEL C
lightweight, collapsible, adjustable. Comes with tripod locking device. All aluminum construction



OWERBY MUSTANG MODEL 10
A professional miniature stand designed for low budget applications without sacrificing quality.



GEO HI-SPEED EDITING TABLE
Designed to cut down editing time. Rapid construction. Available in 16 and 35mm models.



NOMAD SYNCHRONOUS TRANSMAGNETIC SOUND RECORDER/REPRODUCER
Lightweight, completely portable. Professional quality recording and playback. For use with most 16mm cameras. (ARR 14 illustrated)



REGINA PRODUCTION STAND
Ideal for 16 or 35mm projection, sound or slide. Lightweight. Sturdy construction.



RADIASONIC 400 TYPE 10 SOUND OUTFIT
Finished in water or edge tracking for 16mm film. Other dubbers for 35 and 175mm in stock



LATEST MODEL ARRIFLEX 16MM CAMERA WITH CONTROL SIGNAL GENERATOR AND AUTOMATIC SLATE.
With modulation 1/2" tape recorder. Provides lip picture and sync sound.

In New York:

Camera Equipment Co., Inc.
315 W. 43rd St., N. Y. 36, N. Y.
Tel: 6-1426

In Miami, Florida:

Camera Equipment Co., Inc.
of Florida, 2535 E. 13th Ave.
Miami 8-1604

In Hollywood, California:

Camera Equipment Co., Inc.
4513 Santa Monica Blvd.
Hollywood 9-5518

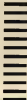
**FIRST CLASS
PERMIT No. 4236
New York, N. Y.
Sec. 349, P. L. & S**

BUSINESS REPLY MAIL

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

**CAMERA EQUIPMENT COMPANY, INC.
DEPT. 65, 315 WEST 43RD STREET
NEW YORK 36, N. Y.**



GEOTRON "CINE KING"
for high performance spot or flood. Lightweight. Low in price. Other Geotron lights available

*

Of the fifteen 1960 Industrial Film Awards, ten went to films shot with Arriflex 16mm and 35mm cameras...a record unmatched by any other camera! A record approached only by Arriflex's winner-majority showing last year.

Why Arriflex? Simply because the Arriflex does the job better and more easily, faster and more economically! You ought to try one of these world-famous motion picture cameras soon.



* ANNUAL INDUSTRIAL FILM AWARDS -
conducted by the publishers of
Industrial Photography magazine

FOR LITERATURE OR DEMONSTRATION OF ARRIFLEX 16
AND ARRIFLEX 35MM CAMERAS, WRITE TO:

ARRIFLEX
CORPORATION OF AMERICA

257 PARK AVENUE SOUTH, NEW YORK 10, N.Y.
WEST COAST: 826 NORTH COLE AVENUE, HOLLYWOOD 38, CALIF.

Value #3 from HOLLYCAM



BELL & HOWELL CINE PRINTERS

New 16mm Model JB
New 35mm Model DC

Features include adjustable printing aperture to eliminate print bleeding; 4-way or Model JB, 5-way on Model DC. Model DC has torque motor take-up. Latest 350 watt super high intensity light source for color 35 speed synchronous drive. Printing speeds 40, 90, 120 feet per minute. Model JB (16mm) and Model DC (35mm) are among the lowest series produced by Bell & Howell. Hollywood brings them to you at substantial savings from the factory price of more than \$5,215.00.

New 16mm Model JB
or
New 35mm Model DC
10% OFF

\$4513.50

FOR Our Price

380-watt Selenium Rectifier for Models JB and DC. Super high-intensity light sources included with each printer.

HOLLYWOOD CAMERA CO.

50611 CHAPARRAL AVENUE
NORTH HOLLYWOOD, CALIFORNIA

PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 142

HARRY WISPE, "Bluesberry" (Bluesberry Productions) with Jackie Cooper, Don McGuire, director.

HARRY GERTMAN, ASC, "My Ed" (Filmways Productions) with Allan Young.

GOLDWYN STUDIOS

NORMAN BRADY, ASC, "Eddie Poole" (Laurie Young Productions) with Laurie Young.



JOHN RUSSELL, ASC

One of the most active cinematographers at RKO, Dallas, John Russell has made several cinematographic contributions to the movie industry.

INDEPENDENT

DANIEL FARR, ASC, "West Side Story" (Paramount Pictures) with Martin Scorsese, director.

CHRISTIAN MATTHEW, "Fanny Hill" (Paramount Pictures) for UA, shooting in Paris with Paul Verhoeven and Jeanne Woodward, director.

BURNETT GAVETT, ASC, "Evidence of Love" (Harold Hecht Productions) with Paul Newman and Katharine Hepburn, director.

ROBERT KRASKE, "El Cid" (Casper Trib. Pictures) with Charlton Heston, director.

GILBERT WARRINGTON, ASC, "Mad Men" (Harvard Films, UA release) with Craig Hill and Elaine Edwards, Eds. L. Cahn, director.

PAUL FICKEL, ASC, "St. George and the Seven Captives" (Bert I. Gordon Productions, UA release) with Basil Rathbone and Fanny Williams, Bert I. Gordon, producer-director.

THEODORE BRUNS, "Daisy" (Harvard Films, UA release) with Jack Hagen and Jane Kennedy, William Witney, director.

MORRIS HARTMAN, "The Defenders" (shooting in New York, Clayco Productions).

ARTHUR DENNIS, "The Young Doctor" (Donald-Valley Television Productions) for UA, shooting in New York with Freddie March and Ben Gaudier, Phil Karlson, director.

ANGELO ROSS, "The Sleeping Partner" (Twentieth Century Fox, shooting in Italy) with Paul Piccoli, Andrew and Alan Talbot, George Cahan, director.

WILLIAM CLYMER, "The Deadly Company" (Filmways Productions) with Robert Kennedy, director.

FRANK PHILLIPS, "Babe on a Dead Horse" (Phoenix Film Studios, shooting in Phoenix) with John Vernon and Lisa Lo, Herbert Brock, director.

TIM MCCORD, ASC, "War Heat" (TED East, UA release) with John Simon and Robert Redford, Denis Sanders, director.

MARIO MONTAUDO, "Last Days of Soliman and Sherif" (Emman Pictures-Triumph, Eastman color; shooting in Morocco) with Steven Seagal and Paul Anka, Robert Aldrich, director.

JERRY TRAMPALEI STUDIO

RAY FOSTER, ASC, "Commercial"

KITTY STUDIOS

GILBERT WARRINGTON, ASC, "The Colonel of Bunker Hill" (Harvard Film Corp. for UA release) with Wanda Hendrix and Roger Malley, Eds. L. Cahn, director.

NETO-GOLDWYN-RATE

TED VORSTLINDER, "The Islanders" with William Reynolds and James Frawley.

STUART THOMPSON, ASC, "National Velvet" (Filmways Productions) with Lori Martin and Ann Doran.

WILLIAM SPENCER, "Peter Gunn" (Spencer Productions) with Craig Stevens.

MILTON KAMEN, ASC, "First Harvest of the Apocalypse" (C-Scope & Color, John Simon Productions) with Gloria Ford and Ingrid Thulin, Vincenzo Menella, director.

RENEE SUTHER, ASC, "Mystery on the Beach" (John Simon Productions & Color, shooting in Italy, America Productions) with Madeline Ettinger and Terrell Howard, Sir Carol Reed, director.

JEREMY RUTENFRANK, ASC, "Ade" (C-Scope & Color, Avon Productions) with Susan Hayward and Dean Jagger, Daniel Mann, director.

JOHN NICHOLAS, "The Goodbye" (CBS-TV) with Preston Foster and Tony Young.

PETER MADON, ASC, "The Tab Hunter Show" with Tab Hunter.

DALE DOUGHERTY, "Asphalt Jungle" (Pict. Robert Berman, ASC, Commercial).

HAROLD SMITH, "The Americans"

N.B.E.

ALAN SCHWARTZ, ASC, "Dance Move Show" (Schwartz Productions, "Groove Move Show") (Film Craft Productions) "Boy Regrets Show" (Schwartz Productions).

PARAMOUNT STUDIOS

WILLIAM SHYRER, ASC, "Empire" (NBC-TV) with Michael Landon and Don Blocker.

FRANK PHILLIPS, "Have Gun Will Travel" with Warner Anderson and Tom Tully.

EDWARD KALLAN, ASC, "Waters" (Harvard Films Productions) with John Wayne and Conrad Bain, Harold Hecht, producer-director.

WILLIAM KELLER, ASC, "The Ladies Man" (Technicolor; Jerry Lewis Productions) with Jerry Lewis and Helen Traubel, Jerry Lewis, director.

CHARLES LANE, Jr., ASC, "Summer and Smiles" (Technicolor; Hal Wallis Productions) with Lawrence Harvey and Geraldine Page, Peter Glenville, director.

SHUNSUKE NAKA, "My Gamba" (Seachika Productions, Technicolor; shooting in Japan) with Shochi Marukawa and Yumi Matsuda, Jack Cardiff, director.

Continued on Page 146

Value #4 from HOLLYCAM

HOUSTON 16 mm COLOR PROCESSOR



Original cost was over \$18,000!

**SPECIAL
\$8950.00**

Process 16mm or double 8mm or speeds from 1 to 20 fps. Tanks are arranged for Anachrome, Stachrome, black and white reversal, negative or positive. Anti-halation-looking reversal unit included. All stainless steel construction. Entire processor is in like new condition.

ADDITIONAL HOUSTON PROCESSOR SPECIALS

HOUSTON 16/35mm LABMASTER

For processing of 16 and 35mm negative or positive black and white film. Designed for darkroom operation. From 1 to 20 feet per minute. Friction clutch drive, temperature control, and more other features. Chemical or auto-stopped reduction from original cost.

LIKE NEW

\$3250.00

Model K-2, 16mm. Negative and Positive. 499.00
Pump and Compressor for Model K-2 150.00
Model K-1A 16mm Neg., Pos., Reversal. 1395.00

HOLLYWOOD CAMERA CO.

10611 CHANDLER BOULEVARD
NORTH HOLLYWOOD, CALIFORNIA

PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 146

LOYAL GREEN, ASC, "Dorothy" (Edward O'Brien Stanley Tiger Productions) with Jeffrey Hunter and Sally Stevens. Edward O'Brien, producer-director.

WILLIAM MCKELLER, ASC, "The Outlaw" (Revue Productions).



ROBERT FITTICE, ASC

Joe Lottini's jewelry cinematographer, Bob Fittice continues to direct the photography of every show on the Ann Harbor Series at DeLo's-Gallerie Mall in Hollywood.

PARAMOUNT SUMMIT STUDIOS

FRED SCHMIDT, "Gammie" with James Arness and Brian Warren.

LINTAS SEGAL, ASC, "Pete and Gladys" (El Camino Productions) with Barry Morgan and Cary Wilson.

REPUBLIC STUDIOS

FRED SCHMIDT, "Stagecoach West" (Four Star Productions) with Wayne Rogers and Richard Eyer.

WALLY WOLF, ASC, "The Van Dwell Show" (Four Star Productions) with Tom Droll and Marilyn Erskine.

KEITH SMITH, "Michael Sturges" (Four Star Productions) with Richard Denning.

CHARLES BUNKE, "Dante" (Four Star Productions) with Howard Duff and Alan Newbery.

REVUE STUDIOS

MAK SYLVESTER, ASC, "Leave It to Beaver" (Gambler Productions) with Barbara Bittengally and Hugh Brannum. Norman Toker, director.

WALTER SYMONE, ASC, "Wagon Train" (Revue Productions) with Robert Horton.

RAY RODRIGUES, ASC, "Lawman" (Revue Productions).

EARL HARRIS, JACK MCKENZIE, ASC, "Bringing Up Baby" (Krys Productions) with Earl Markley and Don Randall.

BEN KANE, ASC, LIONEL LINCOLN, ASC, "Thriller" (Revue Productions).

ROBERT GAUER, "Bachelor Father" (Bachelor Productions) with John Forsythe.

NEIL BECKNER, "General Electric Theatre" (Revue Productions).

CLIFFORD STONE, ASC, "Taming, Tell Me This" (Cody; Ross Hunter Productions) with Sandra Dee and John Gavin. Harry Keller, director.

ARTHUR E. ARNONE, ASC, "Law, Code Book" (U-T Productions-Nak Hill-Armistead) with Rick Hudson and Doree Day. Delbert Mann, director.

JOHN RUSSELL, ASC, BOB KANE, ASC, NEIL BECKNER, "Alfred Hitchcock Presents" (Revue Productions).

KEVIN TRACKEY, ASC, "Westinghouse Playhouse" (Revue Productions).

JOHN WARREN, ASC, EARL HARRIS, "Checkmate" (J & M Productions) with Anthony George.

KEVIN TRACKEY, ASC, JOHN WARREN, ASC, NEIL BECKNER, "Suzanna Slide" (Revue Productions).

JOHN RUSSELL, ASC, "Tall Man" (Revue Productions) with Barry Sullivan.

LARRY LINCOLN, ASC, "Mother Claude Trues" (Pilot; Revue Productions).

JOHN WARREN, ASC, "Frontier Circus" (Pilot; Revue Productions).

TWENTIETH CENTURY-FOX

PHILIP LATHROP, ASC, "Hong Kong" with Red Taylor and Lloyd Richner.

LARRY ARNONE, ASC, "Adventures in Paradise" with Gardner McKay and Warren Levy.

PETER FORRESTAL, ASC, "Fables of Aesop" (Scope & Color; Triton Pictures Corp.; shooting in Europe) with Brad Dicker and Stuart Whitman.

LEON SHAMBERG, ASC, "Snow White and the Three Stages" (Scope & Color) with Carolyn Hester and the Three Stooges. Walter Lang, director.

EDNA CARTER, ASC, "Prison of Yering" (Gloway Productions) with Ken Scott and Leticia Roman. Robert Webb, director.

KAY MORTON, "The Silent Call" (Scope) with Gail Russell and David McLean.

EDNA CARTER, ASC, "Buffy" (Pilot).

FRANK PERLINS, "The Hunter" (Pilot).

ELLENWORTH FREDERICK, ASC, "Maggie" (Pilot).

J. FREDERICK MARLEY, ASC, "Dad Soap" (Pilot).

KENNETH PERLIN, ASC, "The Battle of Shady Beach" (Scope; APT) with Audie Murphy and Debra Michaels. Herbert Coleman, director.

WYATT HOUL, ASC, "Voyage to the Bottom of the Sea" (Scope and color; Triton Allen Productions) with Walter Pidgeon and Joan Fontaine. Irwin Allen, director.

LUCY RICHARDS, ASC, "Hawaii, Let's Go" (Scope & Color; shooting in Japan) with David Hackett and Linda Hamilton. Rinal Walsh, director.

BERNARD UNDERWILL, "Land of Spies" (Scope & color; shooting in Greece) with Richard Egan and Sir Ralph Richardson. Rudy May, director.

WARNER BROS.

LUCY RICHARDS, ASC, "Swan Slide" (Shooting in Monterey) with Tony Danza and George Stevens. Delbert Mann, director.

HARRY WALKER, "The Roman Spring of Mrs. Stone" (Color; APT; shooting in London) with Virna Liori and Warren Beatty. Joe Quatero, director.

ERNEST POIND, "Twilight of a Mobster" with Vic Morrow and Leslie Parrish. Joseph Pavey, director.

RALPH WOODARD, ASC, "Cherelle (English)" with Burt Reynolds and Arthur Kennedy. Gordon Douglas, director.

Continued on Page 152

Note: Print quality
begins in the Camera.
(If there's Anscochrome
Type 242 inside,
that is)...

When accurate, unbiased color is needed in the final print, the best start is with 16mm Professional Anscochrome® Type 242. This low-contrast camera film is designed specifically for that purpose. Just test it once. Note the clean highlight detail and excellent D-max in release prints from Type 242 originals. Check the richness of the critical reds, greens and blues. And note the way Type 242 produces consistent characteristics reel after reel. Color uniformity, color accuracy and total dependability . . . three reasons to choose 16mm Anscochrome Professional Type 242 film. Ansco, Binghamton, N. Y., A Division of General Aniline & Film Corp.

Ansco

Type 242

NOW! IT'S NEW! The BIRNS & SAWYER Model 2000 Stop Motion 35mm Projector

Now! It's NEW! — The first 35mm projector with positive-stop, automatic single-frame, electronic action both forward & reverse!

SEE THE BIRNS & SAWYER MODEL 2000!

Now! It's NEW! — The first 35mm projector with variable speed forward and variable speed reverse!

SEE THE BIRNS & SAWYER MODEL 2000!

Now! It's NEW! — The first 35mm projector with reversible push-button control, foot-pedal and frame counter!

SEE THE BIRNS & SAWYER MODEL 2000!

Now! It's NEW! — The first and only 35mm projector with all these features: automatic single-frame advance or reverse; variable speed motor forward & reverse for searching head, constant speed motor forward for sound, remote control panel duplicating controls on machine; can be operated from any distance; 1000-watt lamp with sliding heat filter, sound or silent, 2000 foot capacity on roll-away table.

It's the BIRNS & SAWYER Model 2000, tailored for today's needs in industrial film data and missile exploration.



Projector complete with remote control, sound and roll-away stand. Cat. 3003

From: \$1,295



Interior showing Selys Motor and glass heat filter.



Remote Control Panel. Catalog 3003

WRITE FOR ILLUSTRATED BROCHURE COVERING SPECIFICATIONS



BIRNS & SAWYER

CINE EQUIPMENT

6421 SANTA MONICA BOULEVARD • HOLLYWOOD 36, CALIFORNIA • TELEPHONE: HOLLYWOOD 4-5166

UHLER Film Printers For Professional Results!



35-16MM OPTICAL REDUCTION & ENLARGING PRINTER

Reduction & Enlarging 16-35mm..... \$1,385 00
Combination 35mm Continuous..... \$1,445 00
Reduction & Enlarging 35-16mm..... \$2,475 00
Combination 35-16mm..... \$2,575 00



STEP FILM PRINTER

Steps on 16mm, 120 ft. capacity. 2 steps, 2 negatives. Backer rolls for mounting, sprocket for step film. Heavy cast aluminum construction.

\$1,210 00



16MM CINE PRINTER

Makes copies of 16mm and 16mm sound and silent pictures in color or black and white. All A.C. operation. All features new. Capacity 500 ft. load. Full take-up arms. Heavy cast aluminum construction.

\$195 00

AR Price P.O.B. Detroit

Write for further information

UHLER CINE MACHINE CO.

13761 Wyoming Ave., Detroit 38, Mich.
Pl. 6, Gallyndy 1-4463. Circle "UHLER"

PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 148

ERIN DUPAR, ASC, ROBERT HOFFMAN, "Remains Etc." with Anthony Foley and Connie Stevens.

CARL BORER, ASC, LEWIS JENNINGS, RALPH WOODRUFF, ASC, ROBERT FORSY, ASC, JACK MARQUETTE, "Maverick" with James Garner.

RAY FERNSTROM, ASC, "Romeo" with Ty Hardie, "Cheyenne" with Clint Walker.

ROBERT HOFFMAN, LEWIS JENNINGS, "Raging Twenties" with Rex Brown.

BURT GLENYON, "Lawman" with John Lee and.

CELE MacWILLIAMS, ASC, HUNTER STEIN, ASC, ROBERT HOFFMAN, "77 Sunset Strip" with Elton Sznajder, Jr.

ROBERT FORSY, ASC, RAY FERNSTROM, ASC, JACK MARQUETTE, "Devil's 6" with Troy Donahue and Diane McBain.

THOMAS TETWELDER, ASC, "Commercials" (Philips, Inc.).

20-UNITED ARTISTS

ROBERT WYCOFF, MONROE ARNOLD, "Case of the Dangerous Habit" (20-TV) with Rick Jason.

ROBERT WYCOFF, "Look-Up" (20-TV) with MacDonald Carey.



CHARLES LINE, JR., ASC

Currently shooting "Summer and Solita" in Tishler color at Paramount Studios. The film will produce the classic Lureline Harvey and Genevieve Page.

STEVEN RABOWITZ, "Agamemnon" (Ziv-TV) with Ralph Rogers.

FLOYD SODERSTROM, "Korngolden" (Fidel, Ziv-TV).

MONROE ARNOLD, "King of Diamonds" (Fidel, Ziv-TV).

FLOYD SODERSTROM, "Small Town District Attorney" (Fidel, Ziv-TV).

FLOYD SODERSTROM, "The Pit and the Pendulum" (Paramount & Color) with Vincent Price and John Kerr. Roger Corman, producer-director.

NEW! Combination 16mm Contact Printer Assures Finest Professional Results!

With speed and precision separately at simultaneously negative pickup and second back on positive film, captures second back and negative and picture negative printed on positive in one operation, and positive print in positive reversal, then to blank, color or black-and-white.

New model has many added features: fine technical and mechanical improvements, longer and shorter construction. Machines are the larger printing specialists — 4 sets of feed and take-up sprockets and rollers that secure smooth film flow past the printing operation.

Among the unique features are tap arms which move for picture and sound lamps; adjustable picture light deployment; sensitive counter; flexing light; film holder; scene-to-scene light changes; polished stainless steel aperture plates and gears; precision Dillie bearings; 1/4-p 115v, 60 cycle A.C. motor.

Film capacity: 1220 ft. for both picture and sound back films. Speeds: 3000 ft. per hour.



\$1,770.00

P.O. Order, Mich.

Same model available for 35mm film. Write for descriptive data sheets on this and other model UHLER film printers.

UHLER CINE MACHINE CO.

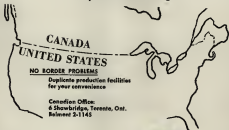
13761 Wyoming Ave., Detroit 38, Mich.


One Source for PRODUCTION RENTAL NEEDS!



- LIGHTING . ARCS . INCANDESCENT
- MOBILE GENERATORS
- TRANSFORMERS
- CAMERAS . . CRANES . . DOLLIES
- CAMERA CARS
- TECHNICAL CONSULTANTS

Frost will handle your production needs from conference room to film can. Studios . . . Transportation . . . Unit Managers . . . Talent . . . Crews . . . Locations . . . Make-up . . . and Script Personnel. Our expanded facilities are yours for the asking.



Faster Service Because We  Our Own

JACK-A-FROST

MAIN OFFICE
224 Ferguson
DETROIT 3, MICHIGAN
TElony 3-8100

CANADIAN OFFICE
6 Shawbridge
TORONTO, ONTARIO
BELmont 2-1145

HOLLYWOOD OFFICE
4824 Hollywood
N. HOLLYWOOD, CALIFORNIA
POlyler 3-0256



USING AN ARRHENIX 35, Larry Lonsburgh shot much of the outdoor footage of "The Wellback Hound" while riding a horse. Horses matched him to follow herds chasing a mountain lion in rough Arizona terrain and to get him in position to shoot desired scenes as other types of transportation could be placed at night. Lonsburgh on horse, discusses upcoming scenes with Walter and Melina Glantz, famed Arizona lion hunters who were featured in his award-winning "The Wellback Hound."



Cameraman On Horseback

Cameraman-producer-director Larry Lonsburgh frequently shot from the saddle to record many of the dramatic scenes that highlight "The Wellback Hound," "The Horse With The Flying Tail," and others in his series of colorful, action-packed short subjects.

By HERB A. LIGHTMAN

EVERYONE LOVES A success story—especially Americans, since it is a basic tenet of our way of life that there is unlimited opportunity in this land for a man who is willing to get in and work hard for a goal he believes in. The Horatio Alger theme of the poor-boy-who-made-good may have become a cliché by now—but the lure is still there. The career of Larry Lonsburgh, cameraman-director-producer of outstanding theatrical short subjects which have won four Academy nominations, follows somewhat in this tradition and should prove an inspiration to young film-makers with their eye on the big-time.

Lonsburgh's latest production, which has been nominated for an Academy Award this year, is "The

Horse With The Flying Tail," a feature documentary in Technicolor. It is a beautifully photographed story of a proud, spirited golden Palomino named Nautical, whose great natural jumping ability enables its rider to win the major trophy in one of the top international horse shows in London.

The story of the man behind the camera that filmed it is perhaps as interesting as that of any picture he has ever made. It is not exactly the classic rags-to-riches saga, although along the way there were periods of hunger, illness and seeming failure. The son of a prominent San Francisco family (his father, an architect, designed and built many public buildings in San Francisco and Los Angeles, including the San Francisco Opera House, the Los Angeles

Shrine Auditorium, and the Warner Theatre buildings), Lansburgh had been riding horses since the age of six. Before the crash of '29, his family's stable of show horses was known from coast to coast. Larry could ride anything: gaited horses, hunters and jumpers, or western horses. When he was fifteen, he won the trick riding championship at the famous Salinas, California rodeo. The old timers in the horse show and rodeo world still remember "the daredevil kid on the little buckskin mare."

When he was in his late teens, Larry became interested in the cattle business and, in order to learn it, got a job on a large Texas cattle ranch owned by a friend of his family. It was a rough grind. The cowboys worked without stopping from dawn to dark—sometimes sixty miles from the nearest habitation—and each cowboy kept eight horses worn to a frazzle every day. The fare was beans and biscuits. The pay, 75 cents a day.

But looking back now, Lansburgh recalls this period as the happiest of his life: "I didn't have a worry in the world. At night, after fourteen hours in the saddle, I'd hit the sack and go right to sleep. A drink of water on the hot, dusty range was a wonderful thing, and so was anything sweet. It gave me a solid set of values and keenly attuned my senses to my surroundings—a priceless experience for an eighteen year old boy."

During this period he always carried his trusty Brownie camera in his saddle bag, snapping pictures as he rounded up the cattle. His early snapshots were fuzzy and inept, but he had caught the camera bug. At this time he happened to meet the late Richard Kleberg, owner of the fabulous King Ranch, who took him up for his first plane ride to show him how the ranch looked from the air. Lansburgh, happily snapping pictures from the cockpit, said to Kleberg, "Someday I'd like to make a movie of this great ranch."

Years later this ambition was realized. He got an idea for a story on the King Ranch and called to get permission to shoot there. Kleberg's brother Robert now managed the ranch. To Lansburgh he was polite but firm—"Photography was not allowed on the King Ranch." Lansburgh happened to mention that he was shooting a sequence at the rival Wagner Ranch, which disputed the King claim of being the largest ranch in the world. When Robert Kleberg heard this, he immediately invited Larry over for a "talk" and ended up extending him the fullest possible co-operation in the use of his land and livestock. The wonderful animal sequences shot on the King Ranch became part of his "Horse of the West," a short subject subsequently sold to Walt Disney. But that is getting ahead of our story.

Larry next spent an exciting and hazardous tour of duty as a special deputy with the Texas Rangers,

hunting out hoarder smugglers along the Rio Grande; but the lure of the movies had gotten under his skin. Fresh off the range and with his head full of ideas for film scripts, he headed for Hollywood. He knocked on a lot of doors. Everyone liked his story ideas but no one was buying. Since he had to eat, he hired out as a stunt rider, doubling for stars in scenes calling for risky horsemanship. He did falls at M-G-M and Warner Brothers, doubling for George Brent and Clark Gable, among others. At \$150.00 per fall he felt he was doing great—eating regularly, too. Then one day he was called on to double for Barbara Stanwyck. It was late in the day, the sun was going down, and the director kept hurrying him to do the stunt. He did not have time to prepare well enough and the horse he was riding over a high stone wall didn't quite clear it. He ended upon the ground with the horse on top of him, his leg shattered.

He spent most of the next two years in a hospital bed, while surgeons put his leg back together like a jigsaw puzzle, using steel bones and silver nails. While he was lying in the hospital, drawing compensation from Warner Brothers, he became interested in what went on behind the camera in a studio and began to study cinematography, screenplay structure and film editing. He also wrote a few scripts. When he got out of the hospital he did some exhibition stunt riding at the Riviera Country Club, and it was here he met polo-enthusiast Walt Disney. He showed Disney his stories and Walt, impressed, put him to work at his studio as a messenger boy-general helper. Lansburgh did a bit of everything,

Continued on Page 178

WHEN A HORSE WON'T DO, Lansburgh takes to a helicopter to shoot scenes for a short subject. Most of his shooting is done with lightweight, portable cameras such as the Arriflex 35 shown here.





SHOOTING A SCENE for a washing machine demonstration. Here the Arriflex camera is mounted at a high angle for a top view of the washer action as director makes demonstration.



MAJOR STUDIO techniques are employed in Philco's highest sound stage for shooting "indoor-outdoors" for a home air conditioner sales. Kim Actor of girls plays scene in front of lighted photo mural of Arroyo landscape.

At Philco, company-produced motion pictures provide an effective medium of communication between the company and its dealers, distributors and employees. Here is an analysis of the lay-out and operation of

PHILCO'S IN PLANT FILM UNIT

By **ROY ZEPER**
Chief Photographer, Philco Corporation

Philco Corporation is but one of many manufacturers in the U.S. which utilize company-made motion pictures in selling, promotion, training and research. The corporation, widely known for its radio, television and home appliance products, has its home office and main plant in Philadelphia, Pa.

The company's first in-plant photographic unit was established in 1954. Its principal activity is producing motion picture films in 16mm and 35mm, slides, film-strips, still photographs, and recordings on both discs and magnetic tape. The unit works solely for the company, fulfilling assignments from any Philco department, including Philco International and the company's Governmental and Industrial divisions.

Films Serve Varied Needs

The motion picture films and audio-visual media we produce serve to present new lines of Philco consumer products to dealers and distributors throughout the world at trade meetings and conventions; to train engineering personnel in advanced methods and procedures; to provide visual progress reports on the company's various government projects; to record tests and analysis of functional operation of products; show service departments how to repair and maintain equipment and products; and to present management messages to distant audiences via the film medium.

Important motion pictures produced to date embrace such subjects as electronics and radar equipment, guided missile components, the manufacture of surface barrier transistors, Tech-Rep personnel,



THE AURICON camera is moved in close for an explanatory shot of a washer mechanism for prewashed film designed for showing in Philco outlets and representatives of appliance trade shows.



THE JAGU MODERN camera and photographic and lighting equipment enables Philco's photographic department to produce films having maximum professional quality from daily selected camera to engaged down for a cleanup.

micro-wave equipment at government installations, television, air conditioners, radio, antennae, phonographs and Hi-Fi, automation, washers, dryers, ranges, and many other products manufactured by Philco.

The in-plant photographic unit includes a permanent five-man staff: Hugh Harper, writer-director; Carl Voelker, manager, who also engages in production; James Calhoun and Herman Gross, both competent all-around still photographers, darkroom technicians and general assistants in film production; and the author, who is chief photographer and assistant manager. All personnel have government security clearances, required in the nature of our assignments.

Professional Talent Used

On productions involving large sets and complicated sync sound, we temporarily acquire the assistance of local personnel for constructing sets, assisting in sound recording, moving lights, equipment and general grip work.

Plant and factory personnel are often filmed engaged at their regular jobs, but for extended speaking parts or character acting, capable artists are engaged from one of the local talent agencies or theater groups.

Our unit is centrally located among the Philadelphus plants, adjoining the administrative office building. Philco Corporation has additional plants in seventeen major U. S. areas as well as in many countries overseas. Several have their own still photographic sections for specific engineering and

graphic arts operations. These localized photographic departments are necessary due to classified subject matter and distant geographical locations.

Our central photographic unit has an area of 1600 square feet, which comprises two studios, a still darkroom, two large storage rooms, editing room, office and changing-makeup room.

Continued on Page 174

AN INGENUOUS camera set up for filming an unannounced cleanup of Philco-made surface barrier transistors. Lenses are mounted on one of draw-sliding transistors. As camera records the setup through hole in white paper mounted below it (to reflect light on transistor) assistant moves paper under the transistor to produce stream of transistors moving in direct color space. Still later was superimposed over background photo of color system.





Everywhere in the world... because it's on film !

"You can't beat a good movie!" That's what people say the world over. And they ought to know—because millions have, and want, no other entertainment.

King, slave, pirate, cowboy, dance-hall girl—whatever the role—we live it, love it, or hate it, along with millions of others who see the film.

Sheer illusion, of course. But how broad it is and how deeply it penetrates—that's the secret of audience response... the reason why good production is such a vital responsibility... the reason why the Eastman Technical Service for Motion Picture Film is constantly on the alert helping the industry solve questions of production, processing, and projection.

Branches at strategic centers. Inquiries invited.

Motion Picture Film Department
EASTMAN KODAK COMPANY
Rochester 4, N.Y.

East Coast Division
342 Madison Avenue
New York 17, N.Y.

Midwest Division
130 East Randolph Drive
Chicago 1, Ill.

West Coast Division
4709 Santa Monica Blvd.
Hollywood 38, Calif.

For the purchase of film,
W. J. German, Inc.
Agents for the sale and distribution of
Eastman Professional Motion Picture Films,
Fox Lee, N.J., Chicago, Ill., Hollywood, Calif.



The advance of science has had its impact on the motion picture film unit of Northrop Corporation. Today, the company's cinematographers work closely with its research staff to provide graphic records of tests and explorations. Some recent projects are detailed in this story of how Northrop's research and development technologists find

Answers Through Cinematography

By DARRIN SCOT

WHEN THE DISCOVERY was made that liquid propellants used to fuel rockets in flight lost their flow characteristic on entering outer space, Northrop Corporation scientists tackled the problem in search of a solution with the aid of motion pictures.

Because it operates one of the finest industrial testing laboratories in the world, Northrop has earned an impressive reputation for its research and development of new techniques and procedures relative to the manufacture of missiles and supersonic jet aircraft. What is not so well known, perhaps, is how the extensive use of motion pictures by Northrop has played a major role in the building of this reputation.

The company's in-plant motion picture unit, located at its Norair Division in Hawthorne, California, is an integral part of its complex testing facility. As such, it performs some functions exotic enough to border on the realm of science-fiction.

One of these functions, unique in the world, is the use of motion picture cameras to explore characteristics of various liquid fuels in space performance. The greatest problem confronting space researchers as far as liquid fuels are concerned, is how to get a fuel out of its supply tank once the space vehicle has soared beyond the earth's gravitational pull, where matter is effectively weightless. Some liquids, when dropped in space in a container, will pull entirely away from the sides of the container and concentrate in the center, resisting the efforts of pumping apparatus to force it out of the tank and into the space vehicle's propulsion system.

In order to research this thorny problem, the Norair Division has constructed a "zero-gravitation" tower 85 feet high and approximately two feet in diameter—the only structure existing which can create a functionally weightless situation on the ground—and so unique that it attracts engineers



ZERO GRAVITY drop tower 85-ft. high used by Northrop technologists to obtain motion pictures of performance of liquids in free drop. Resultant pictures aid study of rocket fuels for outer space flight use.



HOW FLUID CAMERA is mounted on capsule to record behavior of liquids in 25-ft. free drop. Camera is subjected to force of 20g when capsule hits bottom, but only stopped from an impact in over 20 drops.



FOUR 45 DEGREE MIRRORS look small cup of liquid during zero gravity test, reflect image of liquid spread to motion picture camera recording its behavior in study to determine flow problems in outer space use.



NORTHROP cameras fly many missions as part of engineering tests and also to gather footage for motion picture pictures. Here a camera rig is about ready for use on the new Northrop T-38 supersonic jet for the U. S. Air Force.

from all over the world to symposiums on its operation held at the plant. (See photos below, left.)

The heart of this apparatus, simply described, is a capsule within which is another capsule containing an ordinary Eyemo camera of the familiar hand-held, spring-motor type. Mounted about a foot below the camera is a tiny shelf on which rests a capsule containing a glass cup one inch high and one inch in diameter. In this cup is placed one cubic centimeter of the liquid fuel to be tested.

When the test begins, the capsule is suspended at the top of the tower. The camera is started remotely by means of a locking solenoid which trips the switch and holds it down. The shelf holding the inner capsule snaps back out of the way allowing it to drop. A fraction of a second later the entire outer capsule, camera and all, begins to drop—and for a period of two seconds the camera records the behavior of the cup and its contents as they fall freely in what can be described as a simulated zero-gravity or "weightless" condition during the approximately 80-foot drop.

Camera's Ruggedness Proved

The capsule is brought to an abrupt 20-G halt within two or three feet of the bottom by a cushion of corrugated cardboard, which crushes under the impact. Unaffected by the shock of this sudden halt, the Eyemo continues running for the duration of its spring-wind. In more than twenty such punishing runs the same camera has only stopped twice on impact.

A series of mirrors enables the camera to photograph simultaneously not only the top of the cup looking down, but all four sides as well. The cup may wander slightly in space during the drop, but the camera's ultra wide-angle lens keeps it in frame all the way down. The camera runs at a standard sound speed of 24 frames and the film stock most often used is Anscochrome Tungsten 35mm which is specially "scoped" in processing to an effective emulsion speed of ASA 400. Various black-and-

white high-speed emulsions are also used at times. The light source employed consists of four tiny iodine vapor lamps of pressed glass resembling ravioli in general contour and which provide light of constant quality. Because the lamps are quite hot, they are mounted about a foot away from the cup, and the actual exposable light is "piped" to the subject by means of light-conducting plastic.

Schlieren Test Aids Shock Research

Almost as spectacular as the zero-gravity test (although not unique to Northrop) is the Schlieren test, in which motion picture photography also functions as an integral factor. This test takes its name from the German scientist who discovered in the late 19th Century that variations in the density of air will cause light rays to be refracted or "bent." All aircraft in flight are subjected to shock waves and variations in air density which create fluctuating pressures on all exposed surfaces of the plane. In the development of super-sonic jet aircraft and missiles it becomes of critical importance to know precisely what effect these varying pressures will have on different types of aircraft when they are hurtling through space at speeds well beyond the sound barrier. Such pressures can be simulated in wind tunnels, but in order to record the effects for study and research, the physical phenomenon discovered by Schlieren has been combined with motion picture photography to create an invaluable testing method.

In Schlieren testing, parallel rays of light formed by a complex of lenses and mirrors are projected through a slot 1/10 of an inch wide located at one side of the wind tunnel. At the far side of the tunnel a "block" (usually consisting of a razor blade, since these are ground to precise tolerances) is positioned to hold back most of the beam, so that an image picked up by a ground glass and lens system mounted in front of the block appears as a slender

Continued on Page 182



VIEW OF NORTHROP's well-equipped film editing department, part of the company's in-plant motion picture unit at its Hawthorne, Calif.

Shooting

By CLIFFORD V. HARRINGTON



DIRECTOR OF PHOTOGRAPHY Harry Mimura, directly behind the Mitchell camera, focuses on actress Lita Wash, who talks directly to the camera which has assumed the position of actor Reed Hadley, star of the M.E. TV film series. This subjective camera technique mimicked the action scenes of one-hour television drama shows.

ONE OF THE MOST CHALLENGING assignments ever handed to Japanese cinematographer Harry Mimura was photographing the American TV pilot film, "M.R." In this unique series of one-hour films, the camera assumes the viewpoint of the star, Reed Hadley, who plays a lawyer defending Americans in foreign courts.

This technique of placing the viewing audience in the leading man's place was employed significantly, although not for the first time, a number of years ago in the Robert Montgomery picture, "Lady In The Lake," but it reportedly never has been used extensively in a filmed TV show.

When Mimura was briefed on his work, he quickly saw the challenging possibilities of this intimate approach to the TV format, but he also foresaw the inherent complications. Throughout much of the film, the camera would be on the move, rarely resting long enough in one spot for a standard set-up.

With existing equipment in Japan it would have been virtually impossible to shoot this picture within the 16-day period set forth in the schedule. At Mimura's suggestion producer-director John Flores ordered a McAllister crab dolly flown to Tokyo from Berns & Sawyer in Hollywood to facilitate the work. The dolly is said to be the first of its type ever used in a Japanese film studio.

In the competent hands of grip Calvin Olsen, the electrically powered camera dolly became the key-

stone of the whole situation. Even on location, in shooting the few sequences not involving the star, the dolly proved its worth as a time-saver. It was used for normal trucking shots and for moving the camera between set-ups. During the shooting of a sea coast sequence, heavy sheets of plywood were placed end to end on the sand and the dolly rolled over them along the beach.

Lengthy Dolly Action

Both performers and technicians learned early to adapt themselves to lengthy, sustained action. In Tokyo the picture's longest sequence (eight minutes) was "in the can" on the second take. The camera began rolling at the gate of a Japanese house. It followed the action as the voice of Reed Hadley talked to the family maid and later conducted his first interview with his client in the garden within. The sequence covered what normally would have amounted to 18 separate camera set-ups, had the picture been shot in the conventional manner.

Because the camera was in constant motion, the task of following focus became formidable for Mimura's assistant. Often more than twenty focus changes were required during the longer takes.

Mimura, himself, could have used three hands! According to conventional Japanese practice, he also operated the camera. As cinematographer and operator he had to vary the shutter opening to compen-

A TV Pilot In Japan

Subjective camera technique, in which the lens assumes one player's viewpoint, innovates initial segment of "M. R.", a new series of 60-minute TV dramatic shows being produced in Japan with American artists and technicians and with Japanese cinematographer Harry Mimura at the camera.

sate for the variations encountered in the outdoor light, although he had set up booster lights to partially combat this problem.

One outdoor sequence provided a harrowing experience for the camera crew. The men often had to use almost acrobatic skills just to stay with their equipment. The Mitchell camera was set up in the open trunk of a convertible automobile to shoot the scene in such a way as to suggest that the star was sitting in the rear seat, riding along one of Tokyo's congested streets.

Filming A "Thrill" Shot

Mimura squatted behind his camera which had been mounted on a baby tripod. Two of his assistants and a man handling fill lights hung precariously over the sides of the car, while Director Flores managed to fit himself in alongside Mimura. With the aid of straps the men clung precariously to the vehicle during the shooting. The dangerous ride through traffic proved to be one of the most effective shots in the picture.

The company had the use of a small sound stage for four days, which provided only sufficient time for shooting the important courtroom scenes, involving crowds of extras. As a result, a hotel room sequence was shot on location in the director's own downtown quarters. Here grip Olson was given a real workout maneuvering the dolly in the cramped quarters. Mimura barely had room here to squeeze in the necessary lights.

On the set for the climactic courtroom scenes the crew could not afford the luxury of many retakes. The location facilities had to be vacated on schedule, because a local Japanese film company was waiting to move in.

Some idea of the complications encountered in

shooting one sequence, which lasted five minutes on the screen, is described here:

The camera started in the same position that actor Hadley would have assumed in the defense attorney's chair, and in a long shot viewed the prosecuting attorney as he questioned a witness on the stand. Then the camera was shifted to a tight closeup of the female lead. After she spoke several words of dialogue the camera was elevated to Hadley's standing position then moved around a railing and closer to the witness for a medium shot. Following 180-degree pans to the judges at the bench and back to the witness, the dolly moved back and the camera was lowered to Hadley's sitting position. The sequence ended with the camera framing a tight close-

Continued on Page 174



CRAB DOLLY, a new piece of equipment in Japanese film production, was flown from Hollywood especially for cinematographer Mimura's use in effecting dramatic moving scenes shots for the "M.R." pilot film.

THE TECHNIQUES OF CREATIVE FILM EDITING

(Part 2)

The mechanics of editing both picture and sound films and how they are conformed to produce the end result—the final release print.

IN THE INTRODUCTORY article on this subject, which appeared in the February issue, we discussed the matter of good judgment in creative film editing. We now come to the important phase of the procedure—the actual mechanics of editing.

A salient point made in one of the original articles on this subject published in a recent issue of *Calvin Productions'* workshop publication, *The Aperture*, is that once the photography of a production has been processed, and the best takes combined, work-printed and edge-numbered, the all-important original film should be carefully labeled and stored—and not touched again until the entire film is ready for conforming.

The workprint is then broken down by scenes and rearranged in sequence with the script. Now, the real work starts with the rough assembly of the film. This involves:

- trimming,
- reading against,
- trimming,
- reading against,
- trimming.

—etc., until you are satisfied that the show is ready for narration. The optical effects are then marked on the workprint, the narration script cue-marked and the narration recorded.

The narration track is transferred to sprocketed 16mm magnetic film, rough-matched to the workprint, and interlocked. The show is now ready for final polishing, which usually involves sliding nar-



AFTER THE WORK PRINT is broken down by scenes and arranged in sequence according to the script, the next step is rough assembly of the film. One method of selecting the best takes is to run them through a viewer at the same time the sound track film is running through a reader.

ration to some extent and trimming the workprint. The workprint is now interlocked again, for approval, and if there are no additional changes, music is recorded—then the music, narration, and sound effects are mixed and transferred.

At this point the original film is taken from the vault for conforming with the workprint; the printing sound track and the optical effects traveling mattes are synced, cleaned, printed, processed and projected.

Now we are looking at the "answer print."

Methods of Selecting Best Takes

The most satisfactory method of selecting the best takes is to have a script girl on location during production. Here the script girl keeps track of the decisions made by the director and cameraman at the time of shooting. From the selections she has indicated on the take sheet the editor will be better able to pull the best scenes for workprinting.

Another method, although much more time consuming, is for the director to look at the original on a viewer (*one certain not to scratch*). He must also listen to the sound takes and make selections.

A third alternative—less satisfactory and certainly more expensive—is to have all of the original film work-printed. In this instance the director would again have to view the workprint and select the takes to be used.

Continued on Page 128

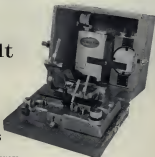
HFC

Hot Splicers

Now Available

in

Custom Built Cases



NO DOWN TIME
WHEN YOU USE HFC SPLICERS
DOUBLE SCRAPING BLADES ON ALL UNITS
MACHINE BLADES GROUND TO CLOSE TOLERANCES
SEPARATE PROFESSIONAL SCRAPING BLOCK
NO DOWN TIME WHEN SCRAPING BLADES BECOME DULL
CHANGE BLADES IN SECONDS

SPECIAL OFFER!

8 & 16MM

70MM

16-35/32-25MM

SPLICER (FS-816)	\$229.50
CUSTOM BUILT CASE	15.00
1 PINT OF CEMENT	2.25
1 PINT OF ACETONE	.65
100 SCRAPING BLADES	44.00
TOTAL VALUE	\$291.40
SPECIAL	\$245.00

SPLICER (FS-70-1)	
(Military perf #2)	
or	
(FS-70-25) Military	
perf #2)	\$375.00
CUSTOM BUILT CASE	20.00
1 PINT OF CEMENT	2.25
1 PINT OF ACETONE	.65
100 SCRAPING BLADES	44.00
TOTAL VALUE	\$441.90
SPECIAL	\$396.00

SPLICER (FS-1)	\$329.50
CUSTOM BUILT CASE	17.00
1 PINT OF CEMENT	2.25
1 PINT OF ACETONE	.65
100 SCRAPING BLADES	44.00
TOTAL VALUE	\$393.40
SPECIAL	\$349.99

THIS OFFER EXPIRES MARCH 31, 1961



HOLLYWOOD FILM COMPANY 956 Seward, Hollywood, California, HO 2-8284 • 524 West 43rd St., New York LO 3-1546



SHOOTING A SCENE for one of the films in the second group of "Heritage" TV films. Director of photography Stanley Lipinsky, far right, watches while camera dolly is maneuvered into position for a closeup.

Applying

By STANLEY LIPINSKY

film for electronic suitability, and at the same time its over-all production qualities were evaluated by the producer.

In the ensuing paragraphs, I will explain how we developed practical methods of satisfying the requirements in film quality for television, using some of the principles of the Teledelexicon system.

Technique Changes Introduced

Our experience was a gradual process of introducing changes to standard technique. We began with these basic rules:

(a) The photographic range in which the cameraman should work would be 40 to 1, in a scale of 10 steps and corresponding densities ranging from 0.25 to 1.85.

(b) People's faces, as the main object of interest, should be kept in constant relationship to the white reference, or area of high-

IN PHOTOGRAPHING the second group in the series of "Heritage" half-hour TV films, produced for Canadian Broadcasting Corporation by Allan Wargon, we endeavored to meet the technical requirements of television broadcasting without introducing any major alterations in standard film production techniques; also to achieve an image on film which would be satisfactory for both television and theatrical use.

When the series first went into production, CBC engineers had not yet officially released details of the company's Teledelexicon system, which permits accurate control and prediction of gray scale, lighting key and mood while shooting is in progress; but some of the principles were known and we began to apply them in our work.

The Teledelexicon System

(For complete details on the Teledelexicon system, I refer readers to the paper, "An Engineering Approach To Television Film," published in the November, 1959,

issue of *Journal of the SMPTE*. The system is explained in detail in Part II of the paper, which begins on page 744 of the *Journal*. Reference is also made to the Editor's explanatory excerpt, which appears elsewhere on this page.)

Each morning, during production, our rushes were screened on a closed-circuit telecine system. Here CBC engineers checked the

TELEDEXICON

A system for making 16mm film for television broadcasting is called Teledelexicon, which stands for Telefilm Density and Exposure Control. It is based on the establishment and maintenance of standardized characteristics for telecine reproduction, the film process and the printing operation. It permits relatively inexperienced personnel to achieve high accuracy in negative exposure and predictable TV gray scale from release prints.

Live TV studio output and telecine film output may be made to have matched gray-scale characteristics. Exposure is determined by measuring scene element luminances with a spot photometer and relating same to telecine video voltage with simple rotary calculators. Teledelexicon permits accurate control and prediction of gray scale, lighting key, and mood while shooting is in progress and before the film is processed. Objective measuring techniques are used throughout—*Journal of the SMPTE*, November, 1959.

Science To TV Film Photography

How practical methods were developed to meet the quality requirements for television in photographing the "Heritage" TV film series for Canadian Broadcasting Corporation.

ent luminosity in the scene. It was suggested that tests be shot of various relationships from 25 to 40 per cent in relation to 100% for the white reference.

(c) Dark areas should be lit sufficiently so that the darkest shadow detail required to be seen would be no more than 40 to 1 in relation to the white reference.

(d) Kodak Plus X would be used to standard gammas, both for negative and positive, and all negative, would be printed at light 11, without timing.

Our first problem was to arrange the lighting and exposure so that a standard processing gamma would provide a range of density on the telecine screen of 0.25 to 1.85. Knowing that density is the Log. to the base of 10 of opacity, it follows that $69.2 / 1.74$ equals 40 to 1, the range required by the telecine engineers. Nearly all modern laboratories process negative to a gamma of 0.65, and positive to a gamma of 2.4. In our case, 0.65 multiplied by 2.4 is 1.56 instead of 1, which results in an increase of contrast in our final ratio.

A Working Range of 25-to-1

This was very important to us, because knowing the coefficient of increase of contrast in particular neg.-pos. processing we could find the range in which cameramen should work in order to comply with the final required range of 40 to 1. So we divided our range of 40 to 1 by the same coefficient of

1.56, giving us a working range of 26 to 1, or in practice 25 to 1.

Our second problem was the necessity of including in our frame a so-called white reference, which could take the form of a white object, or an arrangement of lighting which would provide high lights which would take the place of the white object. Next we had to find a permanent relationship between this area of highest luminosity and the main object of interest within the same frame. This constant relationship would make it possible for the video operator in the broadcasting TV station to keep the brightness of the transmitted picture constant without continually adjusting the controls.

The relationship suggested by the CBC engineers was 25 to 40 per cent less than the white reference, or approximately a brightness lying somewhere between 4 and 3 on the 10-step scale of the video wave-form monitor, or, in photographic terms, a density of between 0.4 and 0.49.

Use of Grey Scale

We are all familiar with the ordinary photographic grey scale having 10 or more steps. For our purposes, we decided to reduce the steps to 4, because TV film production allows very little time for the extra checking of lights. On the set we used a standard

Continued on Page 177



THE AUTHOR, Stanley Lipinsky, who directed the photography of the second series of "Heritage" TV films, produced in Canada for CBC. Lipinsky was both the incident and the reflected type light meter in the measuring his lighting ratios.



FILM TECHNICIAN William Beach removes a sealed color negative from fifty racks of Columbia's cold storage vault. Cones of negatives are stored 40 deep on racks—56 racks to a row. Storage capacity of vault is 25,000 containers.



EACH FILM CONTAINER is securely taped around rim of lid to insure normal moisture retention of negative. Title, reel number and other identifying data is stamped on top. Successful storage system was established by Columbia Pictures some years ago.

Cold Storage Protects Color Negatives

With color TV looming big as a residual market for today's color productions, Columbia Pictures is prolonging the life of its color negatives and retarding image fading by storing them in air-conditioned vaults.

By WILLIAM WIDMAYER

Head of Camera Dept., Columbia Pictures, Hollywood

JUST AS BANKS take every precaution to protect valuable properties entrusted to their care, professional motion picture studios should take equal pains to guard the condition of the conformed color negative footage stored in their vaults.

The responsibility in both of these cases is literally to protect money already in the bank. The residual value of color negatives is a valuable investment, which if treated correctly, will pay even larger dividends after color television becomes a more popular consumer item.

We wouldn't expect to see the

management of a bank stock money and valuables into neat piles in a vault and leave the doors open overnight, inviting trouble. Yet, many in the motion picture industry are guilty of a similar oversight when storing their conformed color negative footage.

Unless color negatives are stored properly, the dye images soon begin to fade. The rate of this fading is determined by various conditions in the storage vault—temperature, humidity, gas content, etc.—and unless properly protected, there is little doubt that a once valuable negative could deteriorate.

This is what happens: the three basic dyes used in color motion picture films—yellow, magenta and cyan—begin to fade when exposed over long periods of time to excessively high temperatures and/or humidity. The yellow dye is the first affected. It loses its density and contrast because of the normal chemical reaction of the dye to adverse vault temperature and humidity.

The problem is complicated because interspersed negative and duplicate negative material—so necessary for achieving special effects—may exhibit differential fading. The yellow dye in the neg-

ative fades first, while the magenta and the yellow dyes in the duplicate negative fade at approximately the same rate. The result is that the dye images may fade differently for the negative and duplicate negative portions of the conformed footage.

In other words, after a color motion picture has been released and the conformed negative has been put into storage, the studio might find at a later date that the color negative and duplicate color negative portions of the conformed footage, have changed differently and re-timing of the footage is necessary to produce high quality prints.

Film manufacturers have recommended that producers make three black-and-white separation positives as the best insurance against loss due to fading of the conformed color negative, or to other damage. If these separation positives are not made and the studio discovers that differential fading in the conformed color film footage has occurred, when additional release prints are needed it will be necessary to re-time the entire footage of the conformed negative.

Making separation positives is an expensive procedure. On the other hand, the re-timing of color negative footage requires the services of a highly-trained technician who may have to make several trial prints in order to get the timing perfect. This can be almost as expensive as making separation positives in the first place and new color duplicate negatives at later dates. Either way, the studio is faced with an expensive and time-consuming operation, if there is differential fading in conformed color negative footage.

Another alternative, and in our opinion at Columbia Pictures, the logical one, is to protect color negatives by storing them in air-conditioned vaults. Storage at controlled low temperatures emphatically slows down the dye changes in color negative material. This is,

Continued on Next Page



Why make a color print?
The scenes you shoot are not on the can until they have been processed and okayed. Since few photographers will risk their camera efforts in a projector, screening of a work print permits checking action, composition, exposure, quality and color rendition. For 16mm color spots.

color work prints

made on Ektachrome Reversal Print Film 7246. With latent image to yellow ink edge numbers, these prints are ready for scanning and editing in a matter of hours after the original shooting.

Jamieson processes your original Ektachrome (Commercial or EP) and work prints on Ektachrome duplicating stock. With all printing and processing under one roof, you are assured of the quickest service combined with the highest quality.

Whenever you use 16mm color, use processing and printing by Jamieson. Send for our complete Laboratory Price List.

POWER LICENSE FROM TECHNICAL FILM COMPANY

JAMIESON

FILM COMPANY

2322 Lynn Dallas, Texas



Make Movies ANYWHERE
With the
Rubylite
PORTABLE MOVIE LIGHT

Searches over 360° & lights in wide angle beam. No glazing but gives you any camera. No bulb needed. No heat to kill long life sealed condenser battery with built in charger. Weighs only 5 lbs. Guaranteed one year.

\$199.50
COMPLETE WITH BATTERY

Shoot SOUND ANYWHERE with portable 115 volt AC power.

Rubylite
POWER-PAC
FOR AUDIOCAM CAMERAS

Power Pac 3^{1/2} weighs 6 lbs. With life-line sealed condenser batteries and charger.

\$139.50

Write for Complete Information to
PHOTOMART
208 So. Howard St., Fresno 2, Fresno
Telephone 2-1140

General Light can save your
135s — preferably available.
It's perfect for "irresponsible"
locations — from 135s to 135mm
stands on most wall surfaces
on screens. Clamps on bases,
handles — hundreds of places.
One light unit and handles
fit in your jacket pocket
that light anywhere you can buy

**LIGHT
OF
YOUR
LIFE**



General Light, 135mm and 135mm
and 135mm handles, one \$19.95
handles one \$19.95 handles one \$19.95
handles one \$19.95 handles one \$19.95
handles one \$19.95 handles one \$19.95

at your service!

16MM

BLACK & WHITE

**reversal printing
and processing**

COLOR PRINTING

- Work Prints
- Feature Service
- Feature-Cover Prints
- A&E Roll Prints
- Color to B & W Prints
- Feature Observers
- New Stock
- Tamed Prints

Write for complete information . . .

LAB-TV 723 Seventh Ave.
N. E. 15, JO 6-2387

LIQUID GATE PRINTING FOR 16-35 BLOW-UPS

An amazing new 16mm and 35mm process
which eliminates subjective, variable, but even
and variable image quality. It is particularly
valuable for use in reclaiming of old and
worn films.

Complete Laboratory and Effect Services
NEW PRICE LIST AVAILABLE — INQUIRIES INVITED

FILM EFFECTS of Hollywood, Inc.
1121 N. Highland Ave., Hollywood 28, Calif.

LEWISWOOD DENNIS, ASC, President
Over 20 Years of Movie Studio Experience

NEGATIVE STORAGE

Continued from Preceding Page

and has been for many years, the recommended procedure for storage of color negatives manufactured by the Eastman Kodak Company.

Since February, 1954, Columbia Pictures has been storing the majority of its color negatives made on Eastman color film in a prefabricated "cold" storage vault situated on the Columbia Ranch in the San Fernando Valley. Temperature in the vault is maintained between 45 and 50 degrees Fahrenheit. The Eastman Kodak Company recommends storage of color negatives at 55 degrees Fahrenheit or below to minimize dye fading.

When film is freely exposed to the air of a storage vault, the relative humidity should also be held at 90 to 95 per cent. A wider range may also be used, but it should be noted that film manufacturers have stated that relative humidities higher than 65 per cent will tend to accelerate dye changes.

We also keep our air conditioned vault free of gases that might be harmful to dyes. Among these gases, H₂S and SO₂ can cause particularly serious problems with yellow and cyan dyes. Thus all film containers are sealed against the entry of harmful gases and are kept free of certain paper and other materials which may release such gases upon aging.

Reprints made from negatives taken from our "cold" vault show that there is only negligible dye fading after years of storage. When compared to color negatives that had to be retained in order to get new prints after only seven or eight months of storage in a vault where the temperature and humidity were above the recommended range, the results are gratifying.

With the introduction of new, high-speed color films in recent years making it more practical for studios to produce motion pictures in color, it is reasonable to assume that this will result in there being more color negatives to store in future years. Also, with the advent of widespread color television apparently just around the corner, the residual value of color negative footage should increase in coming years. Effective storage, therefore, is not only an important expedient but almost an essential one.

It should be noted that if temperature and humidity storage conditions

are extremely severe over a long period of time, fading of dyes could change the original color balance enough so that it would be impossible to make satisfactory prints from the master negative.

There are several approaches to providing "cold" storage vaults for color negatives. Columbia Pictures prefabricated a special vault out of poured concrete slabs. Others have re-conditioned their old vaults.

The color negatives in the Columbia vault are first conditioned to the proper humidity and then stored in their original round tin containers, which are taped around the edges to keep the moisture content of the negatives at the proper moisture equilibrium. Containers are identified by markings on the tape.

A high ceiling gives the vault maximum storage capacity. The containers lie flat in vertical racks with each container on a separate shelf, making them easy to remove. Each rack is 40 containers high and there are 58 racks in a row, giving the vault a potential storage capacity for 25,000 containers.

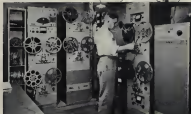
A five-ton air-conditioner unit, with a cooling capacity of 60,000 BTU's per hour, keeps the vault at the desired controlled temperature.

Other unique effects result from storage of color negatives at high temperature and humidity. In addition to fading of colors, high temperatures and humidities cause permanent shrinkage of negative material. Permanent shrinkage at 90 per cent relative humidity is approximately double permanent shrinkage at 60 per cent relative humidity. "Ferro-typing" — the formation of glossy marks on the emulsion when the film is wound tight in contact with the support — is another problem caused by high relative humidity.

Another approach to providing cold storage facilities can be used in the air-conditioning of a standard vault at Pathe Film Laboratories in Hollywood. Pathe installed a one-ton air-conditioning unit in a vault where color negatives made on Eastman film are now stored. The vault has a cooling capacity of 12,000 BTU's per hour, providing an average temperature of 35 degrees Fahrenheit and favorable humidity conditions.

The Pathe vault, which has been operational for more than a year, is 4½ feet wide, 20 feet long and 8½ feet high. It has the capacity to store up to 1,500 square or round containers of

AROUND THE WORLD WITH MAGNASYNC



toronto (antereo, comente)

Cinesound, Limited, one of the most complexly equipped sound recording and mixing facilities in Canada, has found Magnuspac the perfect "systems" solution in meeting the demands of the great motion picture and industrial production newscasts in Canada.

A section of the Cinesound control room is shown in main photo at left, with sound engineer Fred Sengmaier operating one of the famous Model 602 dubbers. The Magnascope-equipped mobile unit is shown on location at Milliken Lakes Mines, Elliot Lake, Ontario, during the Showcase Production filming of "Shady Sisters".



For the development of a complete Magnaspro-Magnaphost sound system Diamond engineers installed Magnatronic modular electrical interlock components for transfer work, assembly and magnetic mixing to assure their clients of the highest quality, reliability and economy.

Numbered among the famous Canadian firms using Magnaminc are

Royal Canadian Air Force	Canada	Government of the Province of Alberta, Edmonton
Canadian Broadcasting Corporation	Canada	University of British Columbia
Vacant Broadcasting	Vancouver	Shaw's Film Studio
Shaw's Film Board of Canada	Montreal	Commercial Ltd.
Bureau Film Inc.	Montreal	Eastern Film Laboratory
TransCanada Films Ltd.	Vancouver	Michael J. Saw Studio

Write, write or phone

MAGNASYNC CORPORATION

5546 Sarcoma Avenue, North Hollywood, California • TRiangle 7-0665 • Cable "MAGNASYNCO"
International leaders in the design and manufacture of quality magnetic recording systems

Magnarum Studio Environment Division Dealers:

[illegible]

Visit our Booth #30 at the SMPTE Convention, in Toronto, Canada, May 7-12

ColorTran INTRODUCES THE

CINEMASTER CHIEF MARK II

TO CONTROL THE EQUIVALENT OF TEN 5-KW

50,000 WATTS

of photographic light

PUSHBUTTON CONSOLE—

6 outlets independently controlled. Select exact color temperature from reading for each outlet—built-in lamp protection interlock for pre-heated warming.

RUGGED—PORTABLE

Ideal for location. Heavy gauge beefed up case. Removable panel to protect meters. 50% more capacity with full duty cycle!

SAFETY ENGINEERED—

Complete integrated 3-wire grounded system to meet accepted safety standards.

WIDER INPUT

VOLTAGE CONTROL—

From 100-V to 120-V and 200-V to 240-V. Can handle ten 500-W PAR-64 lamps (3400° K.) from 220-V input and six 500-W PAR-64 lamps (3400° K.) from 120-Volt.

MORE EFFICIENT LIGHT—

Controls the output of 50,000 Watts of light with 1/4 the normal ampere consumption.



NATURAL LIGHTING CORPORATION
620 South Flower Street Burbank California



CINEMASTER
CHIEF CONVERTER MARK II
\$309.00

CHECKING
\$42.95
(With PAR-64 lamp,
equals one 5-K.)



film (both are used) stacked on edge on horizontal shelves.

It is, of course, up to the individual studios and laboratories to decide whether it is more economical to "cool" an old vault or build a new one. Mark would depend upon the physical dimensions and makeup of the old vault.

The extra dividends that negatives may pay should become increasingly impressive as color television comes of age. The only way to protect this investment is to see that such negatives are properly stored under controlled temperature and humidity conditions.

PHILCO'S FILM UNIT

Continued from Page 159

The main studio "A" is 40 feet by 85 feet and 18 feet high. It is sound-proofed with 1-inch sound-absorbing acoustical material sprayed upon all the walls. A 4-foot wide cat-walk encircles the room at a height of eleven feet, crisscrossing over in the center. This allows easy placement of lights for back-lighting as well as opening with most light units off the floor. There is a 6 pocket Klieg stage outlet box at each end of the studio, each capable of carrying a total of 400-amps. Our lighting equipment consists of the following Mole-Richardson Solarspots: one 10,000-watt, two 5,000-watt, six 2,000-watt, six 750's, two 5,000-watt consoles, four Colortrinos, and an assortment of clamp-ons, Lowel-lites and stands. Nets, scrims, cookies, dodgers, gels, etc., afford us most every professional lighting effect we require.

In addition, we have a small recording studio "B," 22-feet by 35-feet, for projection-viewing and voice-over recording. Our S-5 Stancil-Hoffman 16mm magnetic sound recording equipment is rack mounted and positioned between the two studios, so the sound recorder can operate from either studio, since he can watch both studios through double-glass partitioned windows. The magnetic film recorder operates in sync with the studio camera; it can also run synchronously during playback with the Bell & Howell 202 projector, which has a Selys motor gear-chain drive to its motor. A similar Selys motor electrically interlocked on the S-5 recorder drives off the sync motor for interlock projection. The rack also contains an R-5

Water and Solvents
FILTERS
New low prices
Removes Seal
or Plugs
5 to 30 in. x 6 in.
Single or Multiple
Processing Machines
New and Used
Write for information
METAL MASTERS
3299 University Ave., San Diego 5, Calif.

HOUSTON FRANKS
**PANORAM
DOLLIES**
Thoroughly Overhauled—
Guaranteed
SPECIAL LOW PRICE:
Immediate 4-Wheel — \$1,400.00
Delivery 5-Wheel — 1,600.00
CHANDLER EQUIPMENT CO., INC.
212 West 43rd Street, New York 36, N. Y.
J2000 8-1020

1/4-inch magnetic tape recorder, a Fisher amplifier, and a Rexco-cut for cutting an occasional disc. A Magnascope X-400 is used for location sound recording. In the studio we employ a Mole Richardson Permalulator Type 125B (mike boom) for microphone sound pick-up.

A most useful editing aid is a Moviola. It contains a 16mm picture head, a 35mm picture head, separate 16mm optical and magnetic sound heads, which can be replaced by a 35mm optical head. All can be mechanically interlocked. A sound reader, B&H 16/35mm splicer, a 5-gang 16mm synchronizer and a 4-gang 16/35mm synchronizer, plus rewinds, etc., round out our editing equipment.

Cameras include an Arriflex 35mm, Blimped for studio use; an Anscon 1200, two Case Specials, one B&H Fimo 70H, and a full complement of lenses; and an Epino 71Q for location shots. A 35mm Acme animation camera on a motorized animation stand complete with composed and light box enables us to shoot limited animation and titles. A portable DeVry 35mm projector is used for screening 35mm prints. A Camart studio dolly, a portable crab dolly, plus light and heavy tripods, hi-hats, exposure meters, filters, a Sumicon time-lapse control unit and sundry equipment enables us to handle most any motion picture assignment.

Against one wall of Studio 'A' is a scenery dock containing 10 partitions each housing ball-a-doten flats. These flats are 4'x8' and 4'x10' in size and made of 1/4" plywood, which is painted or wall-papered. Here, also, are single and double windows, doors and archways. Secured together with "C" clamps, the flats and window or door components are readily converted to an office, a kitchen, or practically any type of room set. Whenever our storage room does not have all the necessary props, we either buy the items, or rent. Larger props, such as furniture, etc., can be rented locally for approximately 10% of their value.

In the pre-production stage, the script is blocked out for a studio shooting schedule, for location filming, the actors required, sets and props needed, stock shots, and any special effects or unusual camera shots.

Without planning and imaginative scripting, industrial and technical films can be dull. An interesting series of transitions or a highly dramatic cam-

era shot can drive the film message across with strong impact. We therefore strive to create a few outstanding scenes within every film.

An example is our recent film on the manufacture of surface barrier transistors. A dramatic opening shot depicted a particle of transistor swirling through space, as the camera slowly zooms in. The physical set-up is depicted in one of the accompanying photographs. The transistors were mounted along the edge of a turntable and the camera framed extremely close so as to omit the turntable itself. A white cardboard huffe with a hole cut in it for the camera lens was lit to reflect upon the metallic transistors. As the turntable revolved, its speed controlled by a rheostat, the transistors slowly moved through a thin layer of swirling elgine smoke. Several takes were made at different speeds, and the take selected in which all stroboscopic effect was absent.

The Fels Planetarium of Philadelphia granted us permission to copy a photographic wall mural of the solar system. A 16"x20" still print of the mural was made and placed on our animation stand, then photographed on a very slow zoom-in to correspond with length of the transistor footage. This "colossal body" footage was laid out to be double-printed with the good transistor take. Weird "space" music provided a very effective accompaniment.

In industrial and business films, the simplest subject as well as the technically-complexed holds potential dramatic possibilities for the creative and imaginative motion picture cameraman. Our company has derived many benefits from its in-plant photographic unit. We have consistently cut production costs to below that of most outside industrial film producers, and have saved considerable time in meeting completion deadlines. In addition, we benefit from the convenience of readily-available company products, as well as our own constant availability for any in-plant assignment. Intra-company billing saves bookkeeping and auditing expenses. Another important factor is the automatic security of newly designed models and engineering features that is afforded the company—advantages long recognized by other large industrial companies having their own in-plant photographic department.



We're armed with . . .



SHOOTING A TV PILOT

Continued from Page 145

up of the defense attorney's notes on his desk.

Throughout the complicated sequences, Minura was handicapped by the fact that the Mitchell camera he was using had no coupling device to correct his viewfinder for parallax as the camera moved about. A common luxury in Hollywood, the coupled viewfinder is a rare commodity in Japan. Minura had to make very careful estimates for framing during rehearsals and it is to his credit as a working cameraman that the final results were successful.

Within the studio Minura had to use flat lighting to eliminate the need for changes of exposure as the actors moved about the set. An assistant, however, held a small fill light next to the camera and brought it into play whenever needed.

For the difficult camera work where the versatile dolly could not be used, Minura employed a hand-held Arriflex. In shooting two scenes which showed Hadley stepping from the rear seat of an automobile, it was Minura who did the moving. He used a 25mm lens stopped down to f/22 to give the desired depth of field. Here, use of a wide-angle lens also helped to smooth out jerky movements.

To maintain a consistent quality of the film image Minura used Fuji S88 stock throughout the production. He rated this film at 200 ASA for daylight and 160 ASA for tungsten illumination. When shooting with this film outdoors where the natural daylight was usually too bright, he employed a neutral density filter.

An interesting sequence which kept the whole crew on the jump, was one which took place in a local cabaret. The location was available for only three hours one morning.

Here Minura's primary problem was to capture pictorially the raucous atmosphere of the locale. He had to put his camera literally in the laps of the actors, because of space limitations. When the club was jammed with extras mingling with real bar girls clapping and stamping in time to the music, there was no space in which to move. Minura managed to give variety to his shots here by alternately using lenses of different focal lengths. Luckily, Hadley's part was not included in this



... the right techniques

Now—royalty-free RCA Sound

• Sound • Editorial • Laboratory Services


Capital

CAPITAL FILM LABORATORIES, INC.
2925 PARKVIEW AVENUE, N. E.
WASHINGTON 2, D. C.
PHONE LAWRENCE 8-4824

sequence, so camera movement was not a problem.

Mizura was fortunate in having as his director Flores, who, for many years was a professional still photographer. As a result, he and Mizura were always on firm ground when discussing the important points of framing and movement of the camera.

Because of efficient teamwork and a few breaks in the weather the production achieved a distinction few companies on location in Japan have earned. Although it rained several times, the crew managed to work around the inclement weather and bring the film in in 12 days instead of the budgeted 16. Flores had been told that the shooting would require four weeks. After completing the production he said, "With a little patience, you can shoot here in almost the same time as in the United States."

Mizura is no stranger to Hollywood film production crews. He got his start in motion pictures in the United States. He worked in Hollywood studios during the late 1920's and early 1930's. Upon returning to his native Japan, he became one of his country's top eight cinematographers. He is now under contract to Toei Studios.

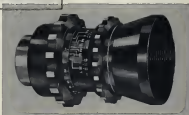
Harry Mizura often takes time out to work a free lance assignment. He will be remembered particularly for the Hong Kong and Japan location sequences which he photographed for the Mike Todd extravaganza, "Aboard the World In 80 Days." ■

TV FILM PHOTOGRAPHY

Continued from Page 149

Kodak 18% neutral-grey or 4-step card, commonly called a Liffy, in which the steps are: white — approximately 18 to 20 per cent; and black—nearly 5 percent reflectance. For white and dark grey I used the Kodak 18 per cent grey card, which has the grey on one side and on the other a white of the approximately 90 percent reflectance. The two grey steps of 18 and 90 per cent represented the minimum and maximum reflectance of the human face, and something in between would be the average. Taking readings from artists' faces during a busy shooting day was difficult, especially if the procedure had to be repeated many times, so I found it more practical to establish at the beginning the relationship between the brightness

New!



SUPER BALTAR* LENSES

... featuring today's highest resolution for wide screen, television and photo instrumentation

This new Super Baltar line of matched motion picture lenses complements and expands the famed Baltar series to include 70 mm coverage. And it balances illumination, flattens the field, and brightens contrast like no lens you've ever seen! You get high picture fidelity from corner to corner, edge to edge, of the film frame—dependable result of the most critical optical characteristics ever built into a professional lens.

Features include: minimum back focus of 32 mm; choice of mounts, barrel or custom focusing, to meet your specific needs; seven focal lengths, from 25 mm to 5", optically centered to full aperture; 70 mm coverage with 3", 4", 6", and 9" lenses.

Write for Technical Publication F-162, Bausch & Lomb Incorporated, 68415 Bausch St. Rochester 2, N. Y.

*Trademark Bausch & Lomb Incorporated

Academy of Motion Picture Arts and Sciences, President of the Academy of Motion Picture Arts and Sciences

BAUSCH & LOMB

SINCE 1873



Revolutionary new Mitchell R-35 Reflex Studio Camera features new Super Baltar Lenses—in special focusing mounts designed by B&L in collaboration with Mitchell engineers.



SPECTRA® 3-COLOR METER

The ONLY meter that measures all light sources, including DAYLIGHT, accurately!

SPECTRA 3-color meter measures the proportionate amounts of all three primary colors present in the light source and indicates the filter necessary for positive color correction in Spectra Index Units ("Kelvin color-temperature table supplied")



Write for descriptive literature and complete specifications.

PHOTO RESEARCH CORP.

ROSE FROST, A.S.C. President
8570 CANUENGA BLVD
HOLLYWOOD 38, CALIFORNIA

Specialized LIGHTING EQUIPMENT

for
MOTION PICTURE, STILL
and
TELEVISION STUDIOS



Write for A Copy of Our
Catalog N on Your Letterhead

Mole-Richardson Co.

827 NORTH SYCAMORE AVENUE
HOLLYWOOD 38, CALIF.

of an artist's face and one of the three greys—dark, light, or something in between—and to maintain this degree of brightness throughout the whole shooting of the film by checking my reading with the Lilly instead of the artist's face.

Now, to keep our range of 25 to 1 (with the relationship between the human face and the brightest white at 65 to 100) in a scene in which the highlights read 100 units on a Weston meter, the deepest shadow should show a reading of 4 units, which is one unnumbered block past 3.2 on the dial. The human face should register at 65 units, or one unnumbered block past 50 on the dial. Or if we work on the most common indoor setup, using Kodak Plus X, with an ASA reading of 64 and a shutter speed of 1/50 of a second, our basic exposure would show as one unnumbered block past 25 units. This would tell us that our highlights should not go over 50 units, and the deepest shadow should not go under 2 units.

In practice, I found it advantageous to use several different meters to achieve the desired result. The setting of lights in the studio required the commonly accepted incident light meter, such as a Norwood Director, and for the general reading of reflected light I used a Weston meter. With the Weston, according to the manufacturer's instructions, the reading should be taken from a distance approximating the size of the measured surface. Thus, if the object is 30 inches in size, a proper reading will be obtained at a distance of 10 inches, but if the object is only 2 inches in size, such as may be the case with a highlight on a man's collar or part of his shirt, the reading becomes impossible. The reflected light meter had disadvantages when working outdoors. To measure the part of the sky enclosed within the frame is a real problem. In such cases the only really practical meter is a spot-brightness meter, such as the Spectra which I used.

The spot-brightness meter is a precise and delicate instrument. Because of its very narrow angle of field it makes possible precise readings of small areas even at a distance, and this was very helpful for our outdoor work. The Spectra spot-brightness meter reads in Foot-Lamberts on a scale of 1 to 50, but a 3.16 times multiplication table makes it possible to read up to 50,000 Foot-Lamberts. Because it is powered

by an enclosed battery, the meter requires constant checking of the zero point. Under certain conditions it is the only meter which can do the job, but it, too, has its limitations. Its weight and its value make it inconvenient to carry around all the time, and as it made in Foot-Lamberts it requires one to stop and calculate in those less-familiar terms. Of course, once the relationship between Foot-Lamberts and Foot-Candles is known, the calculation is much easier and faster.

These simple principles and procedures brought results. Most of our footage fell within the required television range when printed on light 11. The rest of it, with few exceptions, was brought within the range by an adjustment of as more than 3 printing lights. The finished films were broadcast with almost no adjustment by the video operators. And that was the object of this approach—to put the control of the final picture, as seen by the viewers, in the hands of the cameraman and producer. No self-respecting feature cameraman or producer would accept the idea of the projectionist in the theatre deciding what the image on the screen should look like, but that is what happens when TV films are made without reference to the electronic requirements of the television system. Their total relationships are adjusted by the video operator, usually with little, if any, thought to the mood and meaning of the scene. In shooting the "Heritage" series, we went a ways towards changing that, and the road is open for any who would go farther.

(Next month the author will discuss in more detail his theories and projects in lighting and photographing television film productions.)

CAMERAMAN ON HORSEBACK

Continued from Page 157

working as an assistant on animation, live camera, editing and sound—receiving a valuable groundwork in all phases of motion picture production.

When Walt Disney was about to begin his goodwill tour of South America to film "Saludos Amigos," "The Three Caballeros" and "Walt Disney Sees South America," he asked Lary to go with him because of his knowledge of Spanish and horsemanship. His primary assignment was to make a study of the Argentine gaucho,

but Walt also gave him a 16mm camera to use and asked him to shoot some footage as a record of the trip. Lomburgh was fascinated. This was the first time he had ever had full control of a motion picture camera in his own hands and he really caught the fever. He felt like a hot-rod kid who had just gotten behind the wheel of a Ferrari for the first time.

Back home again, and all fired up about film, he began shooting footage in his spare time just to see what it would do. He worked evenings and weekends, and made a short subject on war dogs, using his little boy's red wagon for a camera dolly. He immediately sold the film under the title of "Rover's Rangers" to Warner Brothers, becoming the first person in Hollywood to make a complete film single-handed and sell it to a major studio. It was also the first Minox color film to be blown up to 35mm for theatrical showing.

Encouraged, he bought a better camera and really pitched in to further study motion picture technique. He switched to 35mm, joined the cameraman's union and formed his own company, Larry Landshark Productions.

THE ANSWER TO THE PRODUCER'S PRAYER



RAY MERCER & CO

TITLES... SPECIAL EFFECTS... PRO
WIPES... MATES... SUPERIMPOSE
DISSOLVES... INSERTS... ANIMATION
MINIATURES... STOCK PHOTOGRAPHY
CINEMASCOPE... SLK & HNT... COLOR
FOR FREE SPECIAL EFFECTS CHART
DORAL AVE. HOLLYWOOD 28 CALIF



ALL MODELS fit
IN YOUR CASE

Write for Free Catalogue

CINEKAD ENGINEERING CO.

745 10TH AVE., NEW YORK 19, N.Y.

FAST!

develops reversal film at 1200 ft. per hr.
negative-positive film at 1200 ft. per hr.

MODEL R-15 REVERSAL FILM PROCESSOR

- **EXCLUSIVE DRIVE** eliminates line training, automatically compensates for elongation, lock forage stays constant
- **EASY TO OPERATE**, needs no attention.
- **VARIABLE SPEED DRIVE**, development times from 14s to 32 minutes
- **COMPLETE DRYLINE OPERATION** at all conditions, no dark-room needed
- **FEED-IN ELEVATOR & 1200-FL. MAGAZINE** permits uninterrupted processing cycles
- **STAINLESS STEEL** rods, air squeeze, revolution fittings, air agitate tube, lower roller guards.
- **FORGE WARM AIR DRYBOX**, uses no heating lamps
- Double Capacity Spray Wash
- Uniform Line Size
- Careful Construction
- Size: 76" x 50" x 34"
- Followed Air Supply
- Self-Contained Plumbing
- Built Against Squeals
- Weir Aiming 475 lbs

[illegible]

\$2995

POB
Mary, Penn

Filmline corp. Milford, Conn. AM-61



THE MOST COMPLETE LINE OF LENSES MADE
for Instrumentation and Documentary

MOTION PICTURE PHOTOGRAPHY



PRO 35 and 70 mm LENSES for "C" Mount, Vidicon TV, 35 mm, Data Recording and Aerial Cameras

This series of 4 or more element lenses enables professional photographers to achieve the finest results whether in the studio or on location.

Lenses are matched and balanced give uniform exposure... deliver full coverage without drop-off from the center to the edge of the picture

MIRROTEL LENSES Long Focus, Short in Length and Lightweight

Mirror optics permit the light path to be folded three times within the lens system, thereby cutting the length and weight to less than one third that of a comparable tele-



photo objective. In addition Mirrotel Lenses are free from chromatic aberration, coma, astigmatism and distortion. Focal lengths from 50" to 200" Special accessories available



20-60 mm VARI-FOCUS RAPSTAR ZOOM LENS for Vidicon TV and 16 mm Motion Picture Cameras

Increases the effectiveness of the camera by permitting various degrees of wide angle and telephoto coverage with one lens. Crisp, clear images anywhere in the focal range from wide field (covering 1 1/2 times area of normal lens) to telephoto of

5 1/2 times magnification. Aperture of 1/1.8 throughout the entire focusing range of 5 feet to infinity. Calibrated focal lengths, distance and aperture markings. Resolution is better than 50 lines per millimeter on Phase X film and 600 lines on TV

Write for descriptive literature and prices.



Finest American made products
for those who want the best

WOLLENSAK

Optical Company • Rochester 21, N. Y.



The ordinary reflector bulb burner is an irritant, in much greater in volume. So if you want bright light and save on electricity, without heat, and without removing the bulb? You get Barn Door or Barn Bore! 100-1500 watts 120 to 200 volts. Has extra large rotatable doors. Holds the fit in a jacket pocket. Even the price is as low!

**BARN
DOOR
OR
BARN
BORE**



Get the Barn Door or Barn Bore light fixture. 100-1500 watts 120 to 200 volts. Has extra large rotatable doors. Holds the fit in a jacket pocket. Even the price is as low!

BOLEX ACCESSORIES BY STEVENS

Variable Shutter • Split-Frame Mask • Synchronizing and Battery Camera Drives • Time Lapse Timer • Lens Extension Tubes • Reducers • Tunnel Lens • Third Format Stop • Tunnel View Finder • Camera Base • Lens control. Monthly • 400 Ft. Magnifying • Sound Spectrograph

Write for our Bolex Accessory Catalog

STEVENS ENGINEERING CO.

Dept. "A", 349 N. Newport Blvd.
Newport Beach, Calif.

Inc. After that he made and sold no succession six short subjects. One film he made at the Disney Studio as the studio's contribution to the work of the John Tracy Clinic for deaf children. It was called "Listening Eyes" and its widespread exhibition brought in many thousands of dollars for the clinic.

Learning about Lansburgh's work, Edgar Bergin persuaded Larry to join him in making a picture on Sweden. It subsequently was sold to Warner's as a featurette and titled "Charlie McCarthy and Mortimer Snerd in Sweden." He also wrote and produced a featurette titled "Stranger in the Light-house," which he also sold to Warner's. Another film which Lansburgh made in the wilds of Arizona's Chiricahua mountains was "Desert Killer," which won an Academy nomination. Then he spent a year with Bob Loefer producing "Jungle Head Hunters," a feature-length adventure story which was released through RKO. Still another film which he produced with George Venturian, titled "Mystery Lake," was presented as a serial on Walt Disney's Mickey Mouse Club TV show.

In 1953, Disney interested Lansburgh in a story which he had just purchased: "Storony, the Thoroughbred With An Intensity Complex." Larry again called upon his knowledge of animals and shot the picture in and around the famous thoroughbred breeding farms of Kentucky, and also on California ranches. This film subsequently was presented as a one-hour feature on the Disneyland TV program.

He also produced for Disney release the Technicolor feature film titled "The Littlest Outlaw," adapted from his own original story. The production, filmed entirely on location in Mexico, is the story of the love of a little stable boy for a tamed Olympe jumping horse. It incorporates many bar-raising scenes of homesickness in the daring Mexican tradition, as well as scenes in the bull ring which, for sheer excitement outstrip anything ever seen in a Hollywood production. The narrative portion of the film was photographed by famed Mexican cameraman Alex Phillips, but the daring photography of the animal sequences was done by Lansburgh himself, mounted on horseback in the bull ring. On several occasions he was attacked by irate bulls.

It was while working on this film that he took lessons in the handling

of the cage. He took part in many practice bull fights and still carries a scar on his thigh where he was gored. While working out with a bull on the famed Ortiz breeding ranch, he met the much-discussed American girl-turned-bull-fighter, Betty Ford. Taken with her combination of good looks, personality and dexterity in the bull ring, Larry arranged to make a two-reel short featuring Betty, titled "Beauty and the Bull," which he sold to Warner Brothers.

Even though he now functions as a producer-director, Lumsburgh still does a great deal of his own photography. When it comes to equipment he is not a "gadget" man. He likes to keep it simple, concise, and free of "a lot of things that have to look onto other things." For this reason he has standardized on the Arriflex camera (he owns three of them) and has special pack safeties that make possible instant use of the camera whenever some interesting action or subject suddenly is encountered. There is no waste of precious moments unloading camera from case, etc. "It's like with a fire brigade," he observes. "Get the buckets out fast! This is the whole principle. If we can't work fast we're dead!" Opportunity shots that are missed are rarely recaptured."

Lumsburgh has a four-wheel-drive truck for rugged country use and an air-conditioned trailer for transporting animals which he designed himself. The truck and trailer work together as a unit. He uses an 18mm wide-angle lens for shooting in tight spots, like the interior of a plane, but always carries along a 150mm telephoto lens, which he finds invaluable for capturing closeups of unsporting animals. Unlike many cinematographers, he does not like a zoom lens. "It's too easy," he says, "to become 'too happy' and oversize the effect."

He has a blimp for the Arriflex and a Magnavac synchronous sound recording unit which uses 16mm magnetic film. Most of his photography is re-tetter and he uses reflectors where needed rather than booster lights because of the power source problem. And sometimes he is reluctant to use reflectors because they often tend to destroy the naturalness he is after. Indoors he uses Colorama units; also he is partial to the auto-gyro tripod head because of its light weight and facility of operation.

Lumsburgh's up-'n-at-'em, fire-brigade shooting technique has paid off in pho-

**AFTER 22 YEARS AT THE SAME LOCATION,
TELEFILM IS STILL THE BEST ONE-STOP
16MM MOTION PICTURE SERVICE OFFERING
SPEED, QUALITY, AND DEPENDABILITY.**

TELEFILM

INCORPORATED

4039 HOLLYWOOD BLVD., HOLLYWOOD 28, CALIF.

A leading 16mm motion picture technical service
since 1938

PRECISION® FILM EDITING EQUIPMENT

Precision Unitized Film Synchronizer



Model 5635-1
Single Sprocket 16mm
Synchronizer \$85.00
Single Sprocket 16mm
Synchronizer
(not shown) \$85.00



Model 5640-3
Three Sprocket
16mm Synchronizer
with
Spacer and Mag-
netic head
\$219.75



Sprocket Assemblies
25 or 35mm \$32.90 ea

optical- magnetic sound readers



Model 800
\$299.50



Model 800TL
\$769.30

optical sound readers



Model 620TL
\$185.90

magnetic film and tape sound reader



Model 700
\$198.00

Send for Free Literature

PRECISION LABORATORIES
DIVISION OF PRECISION CINE EQUIPMENT CORPORATION
1007 SPICA AVENUE BROOKLYN 3, N. Y.

SPECIALS!

USED MOVIE EQUIPMENT

35mm Mitchell Camera	\$4,750.00
35mm Bell camera, 2nd-class, 2 regular pins	1,415.00
35mm Bell & Howell 4700 Camera	1,075.00
35mm A.E.C. camera with regular pin	1,415.00
35mm Bell & Howell camera "Spaceliner" with 400 magazine	850.00
35mm Bell-Howell 3.5 recorder	775.00
Urethane Sound-Hoffman 3.5 recorder, 100, complete, for interior location	1,775.00
Urethane Hoffman recorder, complete, remote mixer	600.00
35mm S.C.A. optical recorder	2,630.00
35mm Maxflex optical recorder	3,600.00
45.75mm Weston stilling machine with 1.5 12 inch sound 3,500.00	4,720.00
45.75mm Pictur 35mm sound optical recorder	700.00
45mm Camera	A "Buy"
45.75mm Bell & Howell front-spread optical	1,185.00
35mm Bell & Howell front-spread optical	475.00
35mm Projector with distributor and preview attachments	3,200.00
Western Electric 16mm film, 1000', 1200 RPM, 1640 shutter speed	75.00 each
35mm Baby panorama dolly	1,285.00
35mm Fearless panorama dolly	1,375.00
Reuben Reed for 16mm	150.00
35mm Baby dolly	350.00
35mm Whorrel gearhead for 16mm camera	675.00
35mm Bell & Howell Model "D" printer	3,200.00
35mm Bell & Howell Model "D" printer	3,200.00
35mm Beckman sound machine	475.00
35mm Arden projector optical & magnetic head, forward & reverse	1,475.00
35mm Arden Model D viewer, NEW	175.00
35mm Arden Model DVCIS 8/10 camera	1,400.00
35mm Blimped background process projector, with 8mm type Unit 1 camera, distributor, optical, etc., and high intensity lamphouse	9,450.00
35mm Blimped double-head background projector, equipped on above	11,400.00
1000-AMP, 120-240 Volt, DC camera for mounted on hand rubber lined chassis, with 220V-Alt. AC Drive Amplifier, and all controls (Wadding level)	7,500.00
1000-AMP Generator, equipped same as above	3,200.00
Bell & Howell 25/16mm optical resolution printer, like new	9,975.00

ALSO

Bergala prices in boxes, complete 18" units, 5 KW Otto K. Oleson units, etc.
What are your needs?

MOTION PICTURE ENTERPRISES

POB Ho. Bldgwood Pl., Melrose 26, Calif.
Phone BR 5-7196

tegraphing films such as "The Wetback Round" (which won him the Academy award in 1957 for live action short subjects)—an appealing story of a mountain lion-hunting down of a bound dog. There was nothing phony about the stunning animal scenes in this picture. With the aid of Marvin Glass, one of the world's great lion tainers, really wild mountain lions were hunted and caged. Then, with several cameras strategically placed, the lions were turned loose. It was impossible to control their action, and the magnificent scenes in the film are the result of being at the right place at the right time with a camera (often operated from horseback) that was ready to go.

Lansburgh's preference for simplicity of equipment reflects his entire point of view as far as film-making is concerned: "You must avoid becoming a slave to your equipment," he points out, "otherwise you find yourself running the camera and lenses, and you've lost the whole point of making a motion picture—it becomes merely a hobby. The same simplicity applies to story line. Keep it direct and avoid subplots, unless you can tie them together at the finish. Essentially you have three acts in a motion picture and the object is to arrive at the final climax without losing your audience. The main failing of the amateur is that he sees something beautiful and he can't resist putting it in the picture whether it belongs there or not. People often say to me: 'You must come up and shoot some pictures at our place. We have the most beautiful scenery.' As soon as you start looking for scenery you're dead. But if you have a story with a good tight plot and well-planned action—then, mount it against the most interesting background you can find."

Although Lansburgh loves dogs and horses and has built his success on films starring his four-legged buddies, he emphasizes that he also likes people. "Some of my best friends are people," he says, adding that he enjoys working with good actors, such as the one he recently directed in "The Hold-a-proof Sale" for the Death Valley Days television series. His wife, who was formerly a publicity director for Walt Disney Studios, is today a highly talented writer who works with Lansburgh on all his films.

Lansburgh heads his own company but he hastens to point out that this type of freedom is not without its price. As an independent producer he con-

tinues to make a picture for a certain amount. Whatever he can shoot it for under that figure becomes his profit. He uses his own money, and if he runs over budget he has to take the loss himself. Even so, there are often delays and catastrophes beyond his control, such as occurred during the filming of "The Horse With the Flying Tail," when illness of the equine star and other unforeseen difficulties stretched the production time to 18 months from script to screen.

Larry Lansburgh, a modest man by nature, hesitates to give out anything that sounds like advice, but when pressed, he offered a few tips which might prove valuable to film-makers with ambitions in the field of short subject productions: "Don't try to compete with Hollywood film makers," he cautions. "They're too good, and they have the best facilities in the world to work with. Specialize in something that you know all about and which is off the beaten Hollywood track—and don't try to copy the new guy. Be individual—develop your own technique. A lot of people ask me what kind of equipment I use because they want to shoot the same type of thing that I do—but this is not the answer. It's like playing a musical instrument. Learn to play the instrument that fits your hand—only play it a little bit faster and better than the other guy."

ANSWERS THROUGH CINEMATOGRAPHY

Continued from Page 143

silhouette counteracted by a thin line of light. A model of the aircraft being tested is mounted in the tunnel and when it is subjected to a shock wave or pressure that changes the density of the air the light beam bends slightly. A more dense area of air causes the beam to bend down so that it appears fainter. An evacuated area bends the light up, making it appear brighter.

The unavailability of this test is illustrated the fact that a human hand held straight out will cause a bending of the air for about three feet above it—very similar to the swirling pattern of smoke. The Schlieren test is perceptive enough to record as slight a variation in air density as this or something as explosive as a shock wave created by blowing air at a super-sonic velocity. The fluctuation of the parallel light beam is recorded accurately for study by a motion picture camera set up in

front of the block at the far side of the tunnel.

The Schlieren test can be filmed with almost any type of motion picture camera and filming is done at normal speed for sustained flow tunnel tests. However, a great deal of shooting is also done with high speed cameras because many of the effects observed are of such short duration that they would be completely missed otherwise. For example, a "shock tube" is an artificial situation created to simulate a shock wave. It is impossible to produce the effect by means of compression forcing air through a tunnel because they are incapable of maintaining the tremendous velocities required. So, instead, an extremely high air pressure is built up on one side of a steel plate blocking off one end of a shock tube, and the air on the other side of the plate is evacuated from the tunnel to create a vacuum. The air pressure is increased until the steel plate bulges and finally rips. The air, released with explosive force, rushes through the tunnel in a solid wall as loud as a physical object and reaches temperatures as high as 2,000°, a fact which necessitates the use of stainless steel models in such tests. The entire violent explosion occurs within the space of a few milliseconds—so fast that when filmed at 8,000 frames per second only two or three frames will have captured the effect.

The wind tunnels at NBS are used for Schlieren testing range all the way from 10 ft square for relatively low speed work on down to a 2-inch diameter explosive tunnel. In one of the larger tunnels two motion picture cameras are mounted—a 16mm camera to study the moving effect and a 35mm camera for individual frame studies. Where an effect is constant it is sometimes photographed with a 3x5 still camera.

Almost any light source can be employed which is capable of being put through a lens and mirror system to form a parallel beam. Sometimes the essential parts of small standard projectors are utilized. In some of the larger tunnels light is used. In the color Schlieren system use of color film is preferred because it produces a more vivid image and is capable of recording perceptibly some of the more subtle fluctuations which would be completely lost in black-and-white. Sometimes it is possible to spot an effective pressure on a wing area, for example, just by the color of the light.

SPECIAL EFFECTS

CAN CRITICALLY INHIBIT AND PROTECTIVE

[illegible]

OVER 20 YEARS OF MAJOR TV/VIDEO
EXPERIENCE AND THE FIRST
SPECIALIZED TRAINING ARE NOW
AVAILABLE TO THE INDUSTRY PRODUCERS
Services Included. Now price for availability

FILM EFFECTS of Hollywood, Inc.
3150 N. Highland Ave., Hollywood 28, Calif.
UNAVCO DUNN, INC., Pasadena
Phone: HOLLYWOOD 5-5808 Cable: FILMFX

Automatic Daylight Processing



SEVEN-SPINE TANK

- + Pyrexias up to 300 W
- + Banned down 11mm-75mm
- + Males—X-ray—sterilized
- + Males release females
- + constant friendly demand
- + 400 W each available



FILM. DAYTON

- Water stress—Wetland
- Swampy district
- Aquatic shrub-like willow
- Saline soil and aluminum concentration
- Easily assimilated without loss
- Common, Perennial

Guernsey. Write for Free Literature

Micro Record Corp.

NAIL DOWN YOUR PROFITS!

Camerae—Horn & Horn—Sound
(Single or Double System)—Select
—16 Sound

Keywords: Area—Rural development
—Sports—Finance—Community—
Recreation—All India Rural Experiment

Generators: Portable—Truck Mounted

Sound Equipment: Magnetic—
Optical—Mikes—Booms

Other Equipment Parallel— Cohen—Other Companies

Crowder, Bu-Nose Crab—Workers
Portable Pallets

Leaveen Wick night—Zman—Tele-
phone—Answering

Wedding Equipments Market
Market: Global, Region: Americas

Projection Equipment: Horn & Blum—Sound & Visual—Slide—Overhead

Technology: Closed Circuit TV

Summary

*CICD—Trenčanská žilná železnica
Slovakia, 1998.

RENT FROM CECO*

**CAMERAS • LIGHTS
ACCESSORIES**

Why be equipment-rich, but profits poor? If your main concern is making money, investigate full-service leasing from CECO. Some of America's largest corporations have such arrangements with us. Renting your cars, trucks, and equipment and

accessories puts the problem of maintenance where it belongs—in the hands of factory-trained experts. Your accountant will explain the savings of renting versus buying. Want to talk about it? Call Judson 6-1620. Today!

CAMERA
EQUIPMENT CO., INC.

315 W 43rd St., N.Y. 36, N.Y.
 RM 505 1-6470

for the *Wissenschaften*, *Wissenschaften* :

Gammco Equipment Co., Inc. of Florida
1335 East 17th Ave. • Tampa 2, Florida

Camera Equipment Co., Inc.
Dept. 8, 316 W. 42nd St., N.Y. 36, N.Y.
Gentlemen: Please rush me your FREE complete
catalogue of Bantel Equipment!

110

Figure 1

Cite

1994 1994

BUY, SELL, SWAP HERE!

Largest, Most Productive Classified Ad Section Of Any Publication Serving Makers Of Motion Pictures

STUDIO & PRODUCTION EQUIP.

GOVERNMENT SURPLUS BARGAINS

Mitchell Standard Tripods, w/rip flexion pan & tilt heads used, excellent condition. \$350.00
 Mitchell Standard Tripods, only. 87.50
 Eysen, 71 K, single lens w/variable fader, 3 speeds, 1/8 inch, 2" 1/2 lens. Deluxe case, excellent condition. 110.00
 Bell & Howell A4-A, 35mm camera, Divergent 3-lens turret 200ft mag., 28x motor, 2" 1/2 lens (accepts Eysen iris) case. 129.50
 GSAP-16mm magazine camera—w/lens. 14.95
 GSAP-16mm magazine camera—less lens. 4.95
 Neumark 2 Hub 18mm Synchro video, w/rip counter, large hub, new. 49.50
 Neumark-25mm PIG—CIB—Single Hub—New. 19.00
 B & H Films 18mm viewer, w/large magnifying 5 inch, B&H repair and carrying case used. Box condition. 67.50
 UNIVERSAL COATED EYEMO "C" MF LENSES
 1" 12.5 Bolter. \$48.00
 2" 12.5 Bolter. 40.00
 4" 12.5 Bolter. 75.00
 10" 14.9 Bolter. 75.00

WRITE FOR FREE LIST

INTROCINEMA CORP.

Box 3452 New York 17, NY
 Bell & Howell unit 8 (single). \$450.00
 Bell & Howell unit 1 (shuttle with pump and out for projection). \$550.00
 w/ 400 ft 8MM metal magazines or \$46.00 each.
 Bell 35mm camera Movements, or \$279.00
 Lenses in Mitchell mounts Bolter 5/2 3. \$175.00
 35mm. \$140.00 75mm. Pan Auto. \$60.00
 100mm Cooke deep field focus 5/2 3. \$160.00
 Mitchell Double eye mount. \$175.00
 Special 35mm background projector complete with distributor, motorized camera motor. Write for details.
 Precision Cineable used daily. \$1500.00
 Box 139A, AMERICAN CINEMATOGRAHER
 HOUSTON PHASES Cineable. \$1,290.00
 MAJESTY Follow Focus for 16mm Mount. 795.00
 BAISCH AND JOBB 16mm Lens—
 17.5mm F 2.3 Bolter. 150.00
 25mm F 2.3 Bolter. 150.00
 50mm F 2.3 Bolter. 150.00
 COLLAPSEABLE 3 INCHES ONLY. 80.00
 TRIPCO HEAD—Camera equipment Model 38. 225.00

ALL PRACTICALLY NEW

FILM ASSOCIATES

4815 Coburn—Detroit

CAMERA INCORP. Eysen or Film, 6-volt DC (B&H) 8-48 FPS, with cable and switch (factory cost \$135.00), used, \$35.00, new, \$36.00 postpaid. Cash with order please. Dealers discount in lots of 32 JACK WALTON, P.O. Box 1457, Tampa, Fla.

STUDIO & PRODUCTION EQUIP.

Tel-Amatic 16mm printer with polished and DC power converter equipped with a water control. \$1,300.00
 Concentrated 16mm Bell and Howell printer sound and picture, auto motor light head. 1,200.00
 1" Hollywood printer, continuous 16mm sound and picture auto motor light head. 500.00
 The above printers can be put into operation immediately. Prices lock our promise, New York City.

VIDEO FILM LABORATORIES

350 West 50th Street

MITCHELL magazines, Kodachrome, \$45.00 each. Set of four in case, \$160.00. Cine Special 1 camera with 2 lenses 100 ft magazines, \$335.00. Camera motor, Eysen and Film, 6-volt DC (B&H) original cost \$135.00. Used, \$24.50, new, \$35.00 each. Two Wall cameras and accessories in superb condition. Exchangeable Akaloy gunshots can exist, with or without accessories. Details on request. Akaloy still head, with lens, \$70.00. Cash with Order, please. JACK WALTON, P.O. Box 1457, Tampa, Fla.

35MM MITCHELL Standard, with in-speed gear. Recently completely rebuilt and is finished by Mitchell. Like new 7—Cooke T. 50mm lens, 2—1,800 and 2—400 ft mago sizes, 110V and 12V wall motors, full operates with goddard motor, wide screen and TV ground glass. Focus, mirror. Like Akaloy type rigid, body, in-hand, all cases. Whole works \$8,000.00 or less in stock, \$4,900.00. Private. Will ship prepaid all freight. Box 3454 AMERICAN CINEMATOGRAHER

WALL camera, 35mm lens type, less sound with double door registration pin movement 4 lenses, 12-volt motor, 2—4,000 ft magazine, 4—400 ft magazines, anastigmat and mirror. Like Akaloy type rigid. Used very little. A fine production camera in excellent condition. Will complete or less accessories, or trade on 16mm Mitchell JACK WALTON, P.O. Box 1457, Tampa, Fla.

PRECISION PRODUCTION EQUIPMENT

PRECISION REGISTRATION—USED MITCHELL OR CUSTOM. BLANKET TYPE OR PORTABLE. CATER 6405. COMPLETE WITH SCREENS, IN-TELESCOPE DISTRIBUTORS, CABLES, B&H COME LENSES ETC. FULL INFORMATION PHOTOS AND PRICES ON REQUEST BOX 1340, AMERICAN CINEMATOGRAHER

See S.O.S. Specials on Page 154 and 155
 TRADES TAKEN
 Phone PL 7-8440 • Cobia SOUND
 S.O.S. CINEMA SUPPLY CORP.
 623 W. 52nd Street, New York 19
 Western Branch—6521 Hollywood Blvd.
 Hollywood, California
 Phone HO 7-2124

CAMERAX 35mm camera, lens lenses and body. Like new 12-volt motor and tripod adapter, 2—400 ft. and 1—200 ft magazines, \$135.00. 'Is is' appears in good condition. B&H Eysen Q with 3 lenses, filter set and travel finder, 2—400 ft magazines, motor. As new, \$675.00. JACK WALTON, P.O. Box 1457, Tampa, Fla.

STUDIO & PRODUCTION EQUIP.

35MM STANDARD BELL & HOWELL CAMERA WITH 2, 4 and 6" LENSES UNIT 1 MOVEMENT MODEL #473 EXCELLENT CONDITION IDEAL FOR ANIMATION, OPTICAL OR TITLE STAND OPERATION. BEST OFFER BUY IT CALL OF WIRE L. STEIN, c/o FRED A. HILLS PRODUCTIONS, INC. 1658 W. WASHINGTON BLVD., CHICAGO, ILLINOIS, SILEY 4-1811.

HOUSTON Model 189C, 35mm, R/W probe. one Princeton roller rig or 35mm film without changing cameras. Mag film 400 to 1,200 ft. Pos. film 1200 to 2400 ft. 35mm steel tank. Refrigeration and heating systems. Factory rebuilt and reconditioned. Price about one half original cost. Write or phone, Warr Wood Box, Houston, Texas 77054, 11801 W. Olympic Blvd., Los Angeles 64. BR 2-4331.

AURICON Pro 293 with 21720 viewfinder, rangefinder, variable, motor box, motor is electric amplifier like new \$790.00. Also Auricon 293 R recorder Model 32 type motor, like new, less amplifier, \$200.00. Bell & Howell 70 16mm turret, 400 ft magazine, motor, case, perfect. \$495.00. MAIL ORDER FILM LAB., a Vantage Street, Underwood, Pa.

AURICON PRO 800, with NR 25 BT recording amplifier model 1700-50000 gauge carrying truck, 1—500 ft mag. like new, used very little. \$1,245.00. Or will accept Maurer 05 less lens, as trade in and pay the difference. M. A. JOHNS, 15200 Karchner, Glendale, Florida Park 32, Michigan.

GOV'S SURPLUS in new condition FILM DEPT. 185 35mm 290 ft. capacity. Stranex developing outfit. Eysen camera lenses. 6 1A. Movies developed, reversed or positive film. AIR PHOTO SUPPLY DEPT. C-1, 555 East Tremont Ave., New York 17, NY.

PRECISION EYEPOINTER head and with 4—element steel lens. 2—16/35mm stainless steel film rods 428 ft. 16mm or 220 ft. 35mm capacity. 7 ft. all metal drive drive driving drum. STUBINA FILM, 2014 Gilmore Road, Kansas City, Mo.

MAJESTY 05—like new condition with motor box, viewfinder, sync motor, 480—ft mago size, 12 volt field motor and carrying stand, \$1,950.00. Write Box 1432, AMERICAN CINEMATOGRAHER

C mount lenses for 16mm camera, practically new. Angenieux 35mm (15 V), Angenieux 75mm (11.2 A), Cooke Realist 35mm (11 A). Sold as lot only, price \$350.00. • SAUL DAVIS, 2708 Melrose Road, Knoxville 20, Tenn.

82H sound projector with B&H sync motor, \$335.00. DON DURN, 24244 Riverview Ave., Lemoore, California. DAS 4825.

ANIMATION STAND complete with 16mm camera WILLIAM WYPER 7345 West 93rd Pl., Los Angeles 45, Calif. CE 6-3340

CINE Special Series 1 Perfect 17" lens. \$400.00. Write Box 1255, AMERICAN CINEMATOGRAHER

NEAR NEW 16mm lens model ArriFlex. Big discount. Write NORMAN EDAN, 1529 Carroll Drive, S.W., Gulf or phone Phoenix 4 2743

Continued on Next Page

NOTES: Ads are in English 1961, 10 or word. Write-in, ad, 50¢. Text ad in English must be closed ad word and advertiser's name. 30 or word. Modified double format that ad in boldface type, outline or upper and lower must.

50 or word. Text ad with outline is over 1000 ft. in English. Advertiser's name, 100 or word. Double ad, 1000 ft. in English. Double ad, 1000 ft. in English. Double ad, 1000 ft. in English.

Classified Ads

Continued From Preceding Page

STUDIO & PRODUCTION EQUIP.

8MM hi speed films 125 fps fast lens \$150.00 Also Film Mag A with lens single exposure \$25.00 Carefully maintained NATURE FILMS, Box 33, Boston, Maryland

HELP WANTED

ENGINEERS
FOR RESEARCH AND DESIGN IN
PHOTOGRAPHIC AND ELECTRONIC CONSUMER
PRODUCTS

A new research and development organization has been established in Chicago to aid the expansion and distribution program of a substantial manufacturer whose present products are well established in world markets. A number of experienced engineers with M.E. degrees or equivalent will be offered exceptional opportunities for personal advancement and growth. Salaries open, according to power capabilities. Please write, confidentially sending complete resume and salary requirements.

BOX 1400, AMERICAN CINEMATOGRAPHER

EQUIPMENT WANTED

WANTED TO BUY FOR CASH
16MM AND 35MM CAMERAS
AND ACCESSORIES

BETCHES—BES & HORRIS, STANDARD
AND EXEMO—AMSTER—MAHRE

ALSO

LABORATORY, EDITING AND
LIGHTING EQUIPMENT

CAMERA EQUIPMENT CO., INC.
395 WEST 43RD STREET • NEW YORK 36, N. Y.

CABLE—CINEMAP

THIRD OF BEING IT ABOUT?

Yes. It should pay long and well.
Hidden riches may be found
When in an eye trade or sell

CONSIGNMENTS TAKEN

SEE YOUR PRICE — SHEP IT IN —

OUR PERCENTAGE IS SMALL

WRITE US — PHONE R. 7-0448

S.O.S. CINEMA SUPPLY CORPORATION

Dept. 10

800 W. 52nd Street

New York 19, N.Y.

Western Branch — 6231 Hollywood Blvd.

Hollywood, Calif. • ND 7-3124

WHY SACRIFICE

your production and struggle with old or used equipment when we can trade for cash or use equipment? Let us know what you have and what you need.

THE CAMERA MART, INC.

1845 Broadway Fl. 7 6577 New York 23 N.Y.

WANTED TO BUY

All types of bellows, spotting lens, flood lights

Any type. Send us description

French replies

SANIGNITO ELETTRIC

Box 235, Passaic, New Jersey

TRY FOR LAST

FOR THE HIGHEST QUOTE ON

USED MOVIE EQUIPMENT

ROGEMAN & BARE

88 W. 45th St., N. Y. 36, N. Y.

Rehearsal—Alarney—B & H—Wolf—Syston

Cameras—Lenses—Equipment

NATIONAL CINE EQUIPMENT, INC.

205 West 48th St. New York, N.Y.

EQUIPMENT WANTED

WANTED TO BUY

16 and 35mm Arflex and Mitchell cameras—any condition

HUBERT ROSE

161 Rasmussen St. Creek 9, N.Y.

MALIBU 80 complete, less lens. In A. JOSEPH, 12300 Canbyway, Orange Pointe Park 30 Malibu

WANTED: for experimental use Mitchell cameras body only, NC or Standard Canadian important. Give details price JACK WALTON, P.O. Box 1457, Tampa, Fla.

SERVICES AVAILABLE

CINEMATOGRAPHER—writer—director, 40, INTSE New York, seeks interesting, challenging assignments. 19 years of production work on location around the globe, showing action, travel and news documentaries, travel, on-site stops, adventure and commercial films for theatrical and TV release. Unusual Specialist on South East Asia, Africa and Europe, familiar with customs, currencies and habits of the trade. Can draw on vast number of international contacts, get the impossible picture. All types of coverage, flawless, imaginative and to your specifications anywhere around the world. Top notch technical assistant on hand if required. Box 1490, AMERICAN CINEMATOGRAPHER.

WINWOOD DUNN, A.S.C., offers background of 28 years of experience as specialist camera operator with BBC Studios in production companies for creative and unusual assignments in fields of special photographic effects, cinematography, equipment design and specialized laboratory techniques. Current assignment: West Side Story, 3162 N. 1153 N. Highland Ave., Hollywood 38, Calif. Phone Hollywood 9 5808. Cable FILMBR.

ANIMATION PRODUCES IN JAPAN. US quality throughout—layouts, cels, etc. The ONLY studio in Japan doing animation for export to the United States. Orders, animation equipment. Animate world system. INTERJALAN INTERNATIONAL INC., 28 1 Akasaka Hachikocho Tokyo.

ANSWERS THROUGH CINEMATOGRAPHY

Continued from Page 184

building at the Noyori plant. Included is a shooting stage, 70x50 feet, with an L-shaped basic set that can be converted to many uses. The stage is not sound-proofed, since it would be almost impossible to exclude all of the constant manufacturing noises. When lip-synch sound is to be shot sound stage space is rented in a Hollywood commercial film or recording studio. Similarly, all processing of film and re-dubbing of sound tracks are done by laboratories in Hollywood catering to independent producers.

The building includes six large cutting rooms, each of which is completely equipped with Bell & Howell bay options, racks, bins and multi-channel synchroscopes. The unit has four

SERVICES AVAILABLE

SKILLED PHOTOGRAPHER

Desires position as director or photographer 16mm film unit. Considerable experience in all phases of 16mm production. UCLA graduate. Film CAMERON, 5110 Cedars Avenue, Sherman Oaks California 91412-1432

RECORDING & 16mm photography. Fortune Music and artistic subjects. R. E. MATHEWSON, 1163 S. Highland, Los Angeles 9, Calif. Glendale 7 9830

CAMERAMAN available for assignments Florida-California area. Documentary work. UNDERWATER sound BOY CHRISTIAN, 2625 N. Ocean Blvd., Ft. Lauderdale, Florida.

DIRECTOR OF PHOTOGRAPHY 30 years experience. All phases 16/35 production. Presently with large industrial concern. Will be sole in any area. Age 39. Box 1401, AMERICAN CINEMATOGRAPHER.

16mm FILM assignments—Chicago, Zoetrope Studio, Industrial. AMBITIOUS STUDIO FILM PRODUCTIONS, 2754 N. Ashland Ave. Chicago 14 Illinois. RI 8 812

FILM ASSIGNMENTS New York, Boston area. comic, social, short, industrial. ACCORD FILMS, 168 W. 48th St., N. Y. C. Jordan 4 7372

LABORATORY & SOUND

ROCKY MOUNTAIN TEAM HEADQUARTERS

Prism Block & White and Antares—Prism Block—Printing—Retouching—Bibing. Rental • Sales • All types of film in stock. Write for Price List.

WESTERN CINE SERVICE, INC.

312 S. Pearl St. Denver 9, Colo.

Shannon 4 1017

SOUND RECORDING at a reasonable cost. High fidelity 15 or 35. Quality guaranteed. Complete studio and laboratory services. Color printing and transfer coating. ESCAPE MOTION PICTURE SERVICE, INC. 7218 Carnegie Avenue, Cleveland 3 Ohio. Phone OAKland 1 3797

Movielens set up in various combinations of sound and picture.

The unit's extensive film library is housed in a large temperature-controlled room. Classified footage is stored in steel cabinets.

Principal photographic equipment includes two Mitchell Bion cameras, complete with Akely gyro-head inputs and wild and sync motors; four Cine Specials; four Filmos, models H and 70-DL; four 35mm 100ft. load cameras; three Fastax, two Eastman, and two V.D.R. high-speed motion picture cameras, and a Baby camera dolly.

The lighting equipment includes a substantial inventory of Seniors, Juniors, Sky-pans, and smaller lighting units. A large, mobile transformer permits tapping off the company's 440-volt power lines to provide 110-volt 250-amp current anywhere on the premises. And a 1,000-amp mobile gen-

erator provides all the required power when shooting on remote locations.

A Magnasync is used for recording sound effects and lip-sync sequences in the plant where background noises are audible to the situation. Almost all photography is done on Ikon Commercial Ektachrome, or on Ektachrome ER when prevailing light levels are below normal. The demands for duplicate originals necessitate master-printing of much of the footage purchased, and A&B printing is standard procedure for all productions.

Currently, enthusiasm in the unit is being generated by a new and unique development—fluoroscopic cinematography with the aid of television. This will be used to test the performance and durability of "black box" electronic components after they have been sealed in their respective metal casings. Specifically, the components will be subjected to various rigid tests to determine how they will hold up under the severest of treatment. In order to do this, sealed components will be put in operation and "X-rayed" by means of a fluoroscope. The fluoroscopic image will then be picked up by closed-circuit TV and directed to two TV monitors, one of which will have a 15-

second transmission delay so that what it shows on its screen will have actually occurred 15 seconds earlier. It is in front of this monitor that the recording motion picture camera will be set up. The operator will carefully observe the screen while the specimen electronic component under study is subjected to the various tests of vibration, freezing, and other punishment of a most violent nature. When the component is observed starting to break up under this treatment, the camera will then be started to record the entire disintegration cycle on film.

These are but a few of the fascinating research projects common at Northrop, and typical of those in which the company's in-plant motion picture unit functions as an important adjunct to its research and development program. ■

Development of a new ultra-wide angle photographic and projection system, using a single camera and a single projector and capable of throwing a 360-degree picture on one coin and a 160-degree picture on the other is announced by Panavision, Inc., West Los Angeles, Calif. System has many applications in exhibition field.

QUALITY AND SERVICE

16^{MM}

BLACK & WHITE

REVERSAL NEGATIVE POSITIVE PRINTING AND PROCESSING

COLOR Processing—
Super Anacochrome

COLOR PRINTING

Work prints—Timed Prints
Color to Color prints—A & B roll prints
Color to B & W prints—Fades/Disolves
Dye Negative—Multiple prints
Low stock—Fastest service
Loop printing

Write for complete information



FILM
LABORATORIES

330 W. 50th St. • NEW YORK 19, N.Y.
Urban 6-7116

Acceptance of the **MOVIOLA CRAB DOLLY** for motion picture and television cameras is world wide as evidenced by selected testimonials:

Users have learned through experience that the Moviola Crab Dolly provides a mobile platform for their camera that can be precisely positioned with more facility and speed, and with greater accuracy than any other type of camera support.

Regardless of the shot—moving or static—all people engaged in the creative phases of the industry recognize that production values are enhanced by the use of the Moviola Crab Dolly.

PRODUCERS see additional set ups and more fluid camera work resulting in a quality product even on a tight budget.

DIRECTORS can add the dimension of camera movement to their sequences and, through continuous composition, give dramatic force to their story.

CAMERAMEN are able to "roll-in" on tight shots, exploit lighting setups to greater advantage, much "taken" to rehearsals through faithful dolly tracking and re-positioning quickly by smooth precision adjustment.

EDITORS welcome "dishes" that have an infinite variety of shots and added coverage. These values provided by the Moviola Crab Dolly eliminate "choppy" continuity caused by limited setups on ordinary camera supports.

for HIGH production value . . . on a LOW budget

WRITERS see that the Moviola Crab Dolly broadens their scope in its use for dramatic effects.

You can break the stalemate of production values versus cost with the help of the Moviola Crab Dolly. Call or write now for a free brochure—Hollywood 7 3178.

Moviola

MANUFACTURING CO.

1451 N. Gordon St., Dept. AC-1, Hollywood 28 Calif. • Cable address: Moviola, Hollywood, Calif.

Visit us - www.bulldog.com - 24/7
 not a dog, but a dog, not a dog, not a dog.
 Poodle also, bulldog bulldog bulldog bulldog
 bulldog bulldog bulldog bulldog bulldog bulldog

PORTABLE ONE FLOOR
"WIDE : 400"

- More belgian and longer
 - Less weight • Quotations light
 - New design and features
 - Model C: \$150 inc. cheaper
- runoff built by IACN @ LEPPAGE
 1921 Oak Point Dr
 Redwood 28, Calif



FOR FAST ASSIGNMENTS:

Established American corporations manufactured throughout Asia offer complete line products in China, Japan or Korea. Whether you want to do a single deal or a complete contract with Pacific, Hong Kong or other

FARRAS FILM COMPANY

414 © B.G. Choe, B.H. Hong, Y. Kim



FOR THE ANSWERS . . .

For your photographic problems, refer with confidence to the new

AMERICAN
CINEMATOGRAPHER MANUAL

Never before a single book like this gives you detailed answers to hundreds of problems and questions related to Alcohol, IV, Infidelity, military, infidelity and documentary film production.

Other comparative analyses of census biographic data were conducted between the sexes of a single race. Generally, more than 400 pairs of census, precinct and tabulation data and about 100,000 to 200,000 censusographic

There's something in help you go-over page of this valuable left pocket book. Order your copy today!

\$7.50

• **Factorial**

JAMES H. CASH (JIM) ATORCHAPUEZ MANAGER
P.O. Box 7780 Hollywood 36, Calif

Please send me _____ copies of the Application

CHLANTOGENESE RANJAL, Pymed enclosed
Please ship C&D

Name: _____ **Matr.Nr.:** _____

City _____ Date _____ Issued _____

*For orders mailed within California, please

*For orders mailed within California, please

FILM EDITING

Continued from Page 144

Workprintline

The film laboratory, when making workprints, always gives them the standard printing exposure so the cameraman and director can judge whether the original film was normally exposed in the camera. Thus, dark scenes in the workprint will indicate underexposure, and vice-versa.

While it is cheaper to order a black-and-white workprint on a show, "hot" frames, edge-flare, and slight color or exposure shifts are hard to detect in a black-and-white workprint, and this often makes it inadvisable. A color workprint also enables the director to determine color balance in the various scenes of original.

ink printed edge numbers afford the most rapid means of conforming originals to the edited workprint. With this method the original and workprint both have the same consecutive numbers printed at one-foot intervals—in exact sync—for easy identification and confirmation. Of course, the original and workprint must be edge-numbered before any cutting is done on the workprint.

Manufacturer's print-through numbers on original film are difficult and sometimes impossible to read. In addition, these print-through numbers jump from roll to roll.

Break Cut

Through the assembly of the workprint scenes in the order they are to be used, the editor begins to get a hint of the problems ahead in editing, a preview of the finished product, a suggestion of the weak areas, and an indication of the show's length. At this point continuity problems ahead in editing become obvious and extra footage and repetition scenes may be duly noted and discarded. Major shifts in the subject matter will point to a need for optical effects.

After the tangible alterations have been made, the narration should be read while the rough cut is projected; this will enable the director to determine if there is enough appropriate photography to cover each narrative thought.

At this point some directions need to record the narration to the rough cut workprint and then trim both the

WHEN CHANGING YOUR ADDRESS

Please notify us at least four weeks in advance. BE SURE to give your Street address as well as your New Address. Our Circulation Department needs both addresses in order to properly identify your address change.

Your organization will insure that *American Cinematographer* will continue coming to you regularly without delay or omission of issues. Thank you.

picture and sound track together. This method gives the narrator some flexibility in his rate of delivery. If the narration is extremely tight (continuous), this is considered to be the best method.

If there is considerably more picture than narration, the best remedy is to trim the workprint, then re-read the script during projection. This cycle is repeated until the director is satisfied that all superfluous picture material has been removed. Where narration reads too long for a given sequence, cut or rewrite the copy.

During each projection of the workprint, the director or editor should keep in mind the places where optical effects are needed. The desired effects should be marked on the workprint. This brings up a vital point: *For overlapping effects such as dissolves and wipes—throw away 34 frames or more of each incoming and outgoing scene.*

In other words, cut 24 frames, at least, from the head and tail of each scene in your workprint before cutting the workprint scenes together. This is the only way to be absolutely certain there is enough overlap footage on the original to accomplish the desired optical effect in final printing.

This last point cannot be emphasized too strongly. It often happens that an editor will have to change carefully thought-out dissolves and wipe effects because he is forced to allow for overlap when editing the workprint.

Finally, it is advisable to carefully mark the location of all superimpositions, double-print titles and special-length optical effects—along with all other effects; this helps the director to better visualize how the film will appear in answer print form.

(To be continued)

American Cinematographer is indebted to Caffeia Productions, Inc., Kansas City, Missouri, for permission to reprint this reproduction of the series of informative articles on film editing which have appeared in recent issues of *The Aperiodic*, the company's monthly workshop publication for film filmmakers. —Editors

A NATIONAL INSTITUTION

W. J. GERMAN, Inc.

BIGGEST AND OLDEST AGENCY FOR

Sales And Distribution

**EASTMAN PROFESSIONAL
MOTION PICTURE FILMS**

Negatives Positives

Color Black - And - White

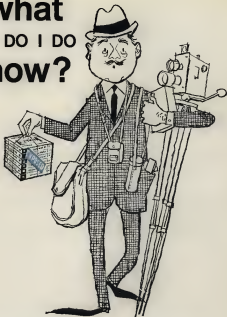
Prompt Service — Everywhere

**Fort Lee,
New Jersey**

**Chicago,
Illinois**

**Hollywood,
California**

what
DO I DO
now?



... call **byron** / motion pictures
of course!

COMPLETE LABORATORY AND STUDIO FACILITIES FOR PRODUCERS . . . UNDER ONE ROOF . . .
IN ONE CONVENIENT LOCATION. Write, phone or wire for information and quotations on any and all
producer and laboratory services.

byron / motion pictures

1226 Wisconsin Ave., N.W., Washington 7, D.C., FEderal 3-4000

1220 East Colonial Dr., Orlando, Florida, OFfery 1-4161

Affiliated with MECCA FILM LABORATORIES CORPORATION, 630 Ninth Ave., New York City